



# **ANALYSIS OF THE GLOBAL AND AFRICAN COTTON ECONOMY IN RELATION TO PROPOSED MULTILATERAL TRADE REFORMS:**

## **IMPLICATIONS FOR USAID POLICY AND STRATEGY**

### **VOLUME I**

**APRIL 2005**

This publication was produced for review by the United States Agency for International Development. It was prepared by: John E. Lamb, Principal Associate for Agribusiness, Abt Associates Inc; consultant Wallace E. Tyner, Ph.D. and consultant M. Dean Ethridge, Ph.D.

# Contents

## Volume I

Preface	i
Acknowledgements	i
List of Acronyms	ii
Executive Summary	iii
<b>1. BACKGROUND</b>	<b>1</b>
1.1 The Brazilian Cotton Challenge	1
1.2 The Cotton Sectoral Initiative and WTO	3
1.3 Other Relevant Development Initiatives	4
1.4 The Cotton-Textile-Apparel Complex	7
<b>2 ABOUT THIS REPORT</b>	<b>7</b>
2.1 Goal, Perspective, and Scope	8
2.2 Specific Purposes	8
2.3 Methodology	9
<b>3. THE ECONOMIC SIGNIFICANCE OF COTTON</b>	<b>10</b>
3.1 Overview of World Cotton	10
3.2 Cotton's Importance to African Agriculture	14
3.2.1 Cotton in North Africa	15
3.2.2 Cotton in Sub-Saharan Africa	16
3.2.3 Cotton in West Africa	17
3.3 Cotton's Role in Global Textiles and Other Manufacturing	17
<b>4. THE ECONOMIC SIGNIFICANCE OF TEXTILES &amp; APPAREL</b>	<b>18</b>
4.1 Contribution to GDP	18
4.2 Contribution to Trade	18
4.3 The Global Trading Context for Textiles and Apparel	19
4.4 Trade in Textiles	22
4.5 Trade in Apparel	22
<b>5. GETTING A HANDLE ON AFRICA'S COTTON-TEXTILE-APPAREL COMPLEX</b>	<b>23</b>
<b>6. OVERVIEW OF AFRICAN C-T-A TRADE TRENDS</b>	<b>26</b>
6.1 African Exports to all Destinations	26
6.2 African Imports from all Sources	29
<b>7. EU POLICIES, TRADE AGREEMENTS, PREFERENCE ARRANGEMENTS THAT AFFECT C-T-A</b>	<b>32</b>
7.1 European Union Common Agricultural Policy	32
7.2 EU-Mediterranean Free Trade Agreement and Partnership Agreements	34
7.3 EU Preference Arrangements for Less Developed Countries	35

7.3.1	Everything-but-Arms Initiative	35
7.3.2	EU Cotonou Economic Partnership Initiative	35
8.	<b>THE SITUATION AND OUTLOOK FOR C-T-A PRODUCTS UNDER AGOA</b>	37
9.	<b>ANALYSIS OF C-T-A TRADE PERFORMANCE FOR AGOA COUNTRIES</b>	41
9.1	Exports of Cotton Textiles and Apparel to the United States	41
9.2	Trade Balance in Cotton-based Products	44
9.3	Export Performance in C-T-A Products by Country	44
10.	<b>STRUCTURAL AND POLICY DISTORTIONS IN SUB-SAHARAN COTTON PRODUCING COUNTRIES</b>	49
11.	<b>OPTIONS FOR ENHANCING THE PROFITABILITY, COMPETITIVENESS, PRODUCTIVITY, AND SUSTAINABILITY OF THE COTTON CLUSTER IN AFRICA</b>	53
	<b>Option 1: Support changes in US farm policy with respect to cotton</b>	53
	<b>Option 2: Revise current USAID policy with respect to assistance for cotton</b>	53
	<b>Option 3: Intensify and expand USG assistance to the cotton sector</b>	55
	<b>Sub-option 3a: Provide support for better governance and further privatization, liberalization, and structural reform of the cotton sector in selected countries</b>	55
	<b>Sub-option 3b: Strengthen the capacity of private agricultural organizations and key sector organizations to clarify their roles, better accomplish them, and better manage</b>	58
	<b>Sub-option 3c: Concentrate on improving technology generation and transfer systems during the transition toward privatization and liberalization, and afterward</b>	59
	<b>Sub-option 3d: Improve linkages between U.S. and African research organizations</b>	60
	<b>Sub-option 3e: Upgrade planting materials</b>	60
	<b>Sub-option 3f: Improve the enabling environment for agricultural bio-technology in general, and genetically-modified cotton in particular</b>	61
	<b>Sub-option 3g: Reduce high seeding rates, maintain seed quality, and improve the policy and regulatory environment for the seed system</b>	65
	<b>Sub-option 3h: Reduce uncertainty for farmers and costs for the cotton economy by expanding and improving financing for production,</b>	

<b>ginning and marketing</b>	67
<b>Sub-option 3i: Help upgrade the production system</b>	67
<b>Sub-option 3j: Arrest the deterioration of soil fertility and degradation of soil structure in a significant portion of the cotton producing areas</b>	69
<b>Sub-option 3k: Work to improve input procurement, distribution, and use</b>	70
<b>Sub-option 3l: Expand the use of good agricultural practices</b>	71
<b>Sub-option 3m: Reduce post-harvest losses and costs through better handling systems and practices</b>	72
<b>Sub-option 3n: Upgrade ginning technology and practices</b>	72
<b>Sub-option 3o: Support the creation and initial operation of a regional ginning school in West Africa, East Africa and/or Southern Africa</b>	73
<b>Sub-option 3p: Reduce the level of contamination in cotton lint in target countries</b>	75
<b>Sub-option 3q: Improve the utilization and marketing of cotton seed</b>	75
<b>Sub-option 3r: Improve seed cotton grading and lint classing</b>	76
<b>Sub-option 3s: Support niche cotton production and marketing</b>	79
<b>Option 4: Concentrate on Textiles</b>	83
<b>Option 5: Concentrate on Apparel</b>	86
<b>Option 6: Improve the Enabling Environment</b>	89

## **List of Figures**

Figure 1: The Fiber – Textile – Apparel Complex	24
Figure 2: Total Imports into the U.S. from AGOA Beneficiary Countries (Data in US \$ millions)	40
Figure 3: Total Imports into the U.S. from AGOA Beneficiary Countries (Data in square meters)	40
Figure 4: Selected List of Product Groups Exported by African Growth and Opportunity Act (AGOA) Countries in 2002	42
Figure 5: 2002 Trade Balance for AGOA Countries in the Principal Cotton Categories	44
Figure 6: Hierarchy of Global Cotton Quality, by Variety, Staple Length, and Ginning Method	62
Figure 7: Equivalent Grades of Cotton in Different Countries of the World	80

## **Volume II**

Annex A	Scope of Work
Annex B	Summary of Provisions of the 2002 Farm Bill Applicable to Cotton
Annex C	Analysis of Trade Policy and Framework Issues Important for Africa with Respect to Cotton, Textiles and Apparel
Annex D	Experience and Potential of GM Cotton in Africa
Annex E	Classification of Cotton in Global Trade: Implications for African Producers
Appendix One:	Exports of Cotton, Textiles and Apparel from African Countries to All Destinations (1998-2002)
Appendix Two:	Imports of Cotton, Textiles and Apparel by African Countries from All Sources (1998-2002)
Appendix Three:	AGOA Imports by Value and Country in Dollars
Appendix Four:	AGOA Imports by Volume and Country – Square Meter Equivalents
Appendix Five:	Overview of Cotton-Textile-Apparel Exports from the Sub-Saharan Africa Countries (by Value), 1998-2002

## **Preface**

This study was commissioned in FY 2004 by AFR/SD in support of the Initiative to End Hunger in Africa (IEHA). Abt Associates has been providing technical support to AFR/SD and selected USAID field Missions since FY 2002 in:

- Preparing selected thematic papers
- Providing guidelines for preparing IEHA Action Plans and providing consulting inputs into focus country and regional mission Action Plans
- Developing an IEHA Results Framework with Strategic Objectives, IR's and indicators
- Offering support to focus country Missions and regional offices in preparing indicators and PMPs in IEHA-relevant SO's

A complete draft of this paper was completed in April 2004. It has been thoroughly updated with information obtained in subsequent work on cotton and textiles in SSA, particularly in the course of undertaking a tour of four West African cotton-producing countries and preparing options for consideration by an interagency USG group in September-November 2004. Other Abt Associates' analytical work and selected implementation activities (support for exhibiting at trade shows) on cotton, textiles and apparel in SSA, through the West Africa Trade Hub (WATH) and the Trade Competitiveness Component of the Southern Africa Trade Hub, has further informed this final report. Note that CARANA Corporation and Abt Associates jointly implement the two hub contracts under the GBTI IQC, using TRADE Initiative funds.

## **Acknowledgements**

The authors gratefully acknowledge the contributions of various individuals who helped review and produce this report. Within Abt Associates, special thanks are due to John Holtzman for his thoughtful critique, technical editing, and assistance with the executive summary. Chris Reynolds provided useful information and insights as well, especially concerning the Bumpers Amendment and export market data. Tien Ngo and Veronica Ramos provided valuable research and logistical support all along the way. Margie Washington was crucial to final assembly. Gwen Appel and Sarah Gavian kept things on track. Last but not least, from within USAID, Dave Soroko and Jeff Hill provided helpful substantive guidance, and showed unusual patience. We are very appreciative.

Recognition is also due to the International Cotton Advisory Committee, which kindly granted permission for the authors to borrow and hopefully make good use of many of its datasets and reports.

## **Disclaimer**

**The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development**

## List of Acronyms

ACP	Africa, Caribbean and Pacific countries (signatories to Lomé and Cotonou Agreements with EU)
AGOA	African Growth and Opportunity Act
AID/W	USAID/Washington
AMTAC	American Manufacturing Trade Action Coalition
AoA	Agreement on Agriculture (WTO)
ATC	Agreement on Textiles and Clothing (under WTO)
ATMI	American Textile Manufacturers Institute
CAFTA	Central American Free Trade Agreement
CAP	Common Agricultural Policy (of the EU)
CBI	Caribbean Basin Initiative
CCC	Commodity Credit Corporation (of the U.S.)
CDDCs	Commodity-Dependent Developing Countries
CDO	Cotton Development Organisation
CEECs	Central and Eastern European candidate countries for EU enlargement
CFA	currency used in Francophone West Africa
CFDT	<i>Compagnie Française pour le Développement des Fibres Textiles</i>
CGE	computable general equilibrium (econometric model)
CITA	Committee for the Implementation of Textile Agreements
CMDT	<i>Compagnie Malienne pour le Développement des Fibres Textiles</i>
COMTRADE	United Nations Trade Database
C-T-A	Cotton, Textile, Apparel Complex or value chain
DFID	Department for International Development
EBA	Everything but Arms (amendment to the EU's Generalised System of Preferences)
ELS	extra-long staple cotton
EPA	Economic and Partnership Agreements between the EU and ACP regions
EPZ	export processing zone
EU	European Union
EUREPGAP	European Retailers Programme for Good Agricultural Practices
FAOSTAT	statistical database of the Food and Agricultural Organization of the U.N.
FDI	foreign direct investment
FLEX	EU instrument to compensate for losses of export earnings
FSU	Former Soviet Union
FTA	free trade agreement
FZA	Franc Zone Africa (cotton producing countries in West Africa that use the CFA)
GAP	Good Agricultural Practices
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GM, GMO	genetically-modified (organism)
GMP	Good Manufacturing Practices
GRAIN	Genetic Resources Action International (NGO)
GSP	Generalized System of Preferences
GTAP	Global Trade Analysis Program (of Purdue University's Center for Global Trade Analysis, Department of Agricultural Economics)
HTS	Harmonized Tariff System
HTSC	Harmonized Tariff Schedule Code
HVI	High-Volume Instrument (for testing lint characteristics)
ICAC	International Cotton Advisory Council
IEHA	(U.S. Presidential) Initiative to End Hunger in Africa
IMF	International Monetary Fund



IPM	integrated pest management
IPR	intellectual property rights
ISMAA	International Service for the Acquisition of Agri-biotech Applications
ISO	International Standards Organization
ITC	International Trade Centre (UN)
ITMF	International Textile Manufacturers Federation
LDDC	Lesser Developed Developing Country
LE	Egyptian pound
LS	long-staple cotton
MFA	Multi-Fiber Agreement
MMF	man-made fibers
MT	metric ton
NAFTA	North American Free Trade Agreement
nes	not elsewhere specified
NGO	non-governmental organization
NGQ	National Guaranteed Quantity (of cotton lint for each EU member state)
OBM	original branded manufacture
OECD	Organisation for Economic Cooperation and Development
OEM	original equipment manufacturer
OPS	Open Production System
OTEXA	Office of Textiles and Apparel (U.S. Department of Commerce)
RTA	regional trade agreement
ROO	rules of origin
SAR	Special Administrative Region (of the PRC)
SITC	Standard Industrial Trade Classification (system or code)
SKU	stock keeping unit
SLM	Strict Low Middling (a grade in USDA cotton classification system)
SME	square meter equivalent; small and medium scale enterprise
STE	state trading enterprise
SPS	Sanitary and Phyto-Sanitary (WTO Agreement on this topic)
SSA	Sub-Saharan Africa
TBT	Technical Barriers To Trade (WTO Agreement on this topic)
TRADE	(Presidential Initiative) Trade for African Development and Enterprise
TRQ	Tariff Rate Quota
UCR	Usual and Customary Rates
USAID/AFR/SD	Office for Sustainable Development, Africa Bureau, USAID
USDA	United States Department of Agriculture
USDA/AMS	Agricultural Marketing Service (USDA)
USDA/APHIS	Animal and Plant Health Inspection Service (USDA)
USDA/ERS	Economic Research Service (USDA)
USDA/FAS	Foreign Agricultural Service (USDA)
USDA/FSIS	Food Safety Inspection Service (USDA)
US	United States of America
USG	United States Government
USTR	United States Trade Representative
WTO	World Trade Organization

## Executive Summary

Cotton has global economic significance. Cotton-related activity affects all countries to some degree, whether they are producers of cotton, users in textile/apparel manufacture or oilseed processing, or consumers of finished garments, household items or myriad other items that use cotton or its derivatives.

This report provides an overview of historical trends in cotton production, consumption, and trade--on a global scale, within the African continent, in Sub-Saharan Africa (SSA), and finally for each of the main producing regions and blocs with SSA. Particular attention is given to West Africa, because from a policy and programming perspective, those countries are getting considerable USG and USAID attention at this point in time.

In order to better inform policy within USAID and to provide a technical and statistical foundation for policy dialogue with other U.S. Government Agencies, this report considers the situation and outlook of the Sub-Saharan Africa (SSA) cotton economy not in isolation but rather in the broader context of global cotton, textile and apparel production and trade.

Key aspects of that context include: (1) the complaint filed in 2002 by Brazil before the World Trade Organization (WTO) concerning subsidies allegedly provided by the United States to cotton producers and users involved in export; (2) the so-called Cotton Sectoral Initiative proposed to WTO in 2003 by four leading cotton-producing countries in West Africa; (3) other cotton sector development initiatives sponsored by the European Union and World Bank for Sub-Saharan Africa; (4) the phase-out of the longstanding WTO Agreement on Textiles and Clothing (ATC) that just occurred on January 1<sup>st</sup> of 2005; and (5) on-going, export-oriented expansion by the People's Republic of China in virtually all facets of the cotton, textile and apparel industries. Informed observers generally believe that what happens in China with respect to the production of cotton, textiles and apparel, as well as the import or export of all three commodity groups, is the principal determinant of the situation and outlook of virtually the entire global cotton-textile-apparel (C-T-A) complex. In other words, China has become the swing factor.

These contextual circumstances are all having a significant impact on the C-T-A complex within the many Sub-Saharan Africa countries involved in these sectors, and will continue to have impacts for years to come. This report describes how cotton producers and textile/apparel manufacturers throughout Africa have sought to compete in regional and global markets of interest, despite the huge changes occurring around them, as well as considers the likelihood of their future success.

Cotton has had a long history in Sub-Saharan Africa (SSA), but its role and significance has expanded greatly over the last decade as area planted has risen, despite volatile prices that would seem not to warrant any expansion at all. The structure, conduct, and performance of cotton production, processing, transformation, marketing and trading activity varies greatly within the SSA region. While cross-country and even cross-regional generalizations are possible for analytical purposes, any decision by USAID to provide substantial support to the cotton sector in Africa should take into account very carefully the country-specific differences as well as the similarities, particularly with respect to policy and institutional reform.

Most SSA countries have concentrated on the production for export of primary products. Lint sales abroad are a major source of foreign exchange for several Francophone countries in West Africa (Benin, Burkina Faso, Chad and Mali). As a group, these Francophone SSA cotton producers represent the third largest lint exporter after the U.S. and Uzbekistan. Sudan, Zambia, Zimbabwe, and Tanzania also have vibrant cotton sectors.

In total some 30 SSA countries grow cotton. More than 10 million growers are involved, most of them smallholders. The total area planted approaches five million hectares. Exports for the 2004/05 marketing year are forecast to be worth about US\$1.2 billion. The resulting foreign exchange revenue is crucial to many exporting countries, especially within West Africa. The cotton economy is inextricably connected to the rural and agricultural economies of Sub-Saharan Africa through spillover effects and linkages of all types. Aside from its direct impact on farm income, cotton induces business spending, and indirect impacts through income multipliers that support non-farm enterprise in rural areas. In addition, cotton revenues help directly to finance many central governments and local community development projects, such as rural tracks, schools and clinics.

In the long run worldwide consumption of cotton fibers for home and industrial uses is expected to keep pace with population growth, yet continue to lose market share to synthetic fibers. For some applications in spinning, dyeing, finishing, or weaving, synthetics have superior traits; and are especially competitive in cost-sensitive or technical textiles.

Effective demand for cotton lint expands or contracts from year to year with overall economic conditions, and is routinely affected by the price volatility inherent in any natural fiber. After a high period that peaked in 1996, nominal global lint prices fell steadily in the late Nineties and early into this decade, with modest yet variable recovery in more recent years. Unfortunately for cotton-producers all over the world, real lint prices have been falling over time.

Over the last two years, West African producing countries and Brazil have argued forcefully that U.S. and EU production subsidies have helped to depress world cotton prices. The initial and final WTO findings on the complaint lodged by Brazil against U.S. policies mostly support that position. At this point in time, there appears to be general consensus among knowledgeable observers that removal or reduction of production support for cotton in the United States and the European Union (EU) would indeed lead to somewhat tighter global supply and therefore higher prices—although not necessarily the 10-15% bump that Brazil and the African countries have been claiming.

This paper examines not only U.S. farm policy as it applies to cotton, but also how EU policies, particularly its Common Agricultural Policy (CAP) and various trade agreements (ACP, EU-Mediterranean FTA), affect cotton production and exports in SSA, as well as SSA opportunities for textile and apparel exports to the EU.

Even if it is true that eventual reduction in the aggregate measure of support provided by the USG or EU to cotton might have some positive impact on global prices, unfortunately in some of the SSA countries—West and Central Africa especially—the income that actually accrues to smallholders does not bear a close relation to movements in global market prices. This is because the causal linkages are affected by rigidities in the timing, level, and nature of prices offered and received, by input pricing that may not reflect world market conditions, and by a less than transparent or efficient supply chain.

In most SSA countries, economic distortions continue to affect: planting decisions; the availability, cost and utilization of seeds and agrochemicals; harvesting and assembly procedures; the grading of seed cotton; purchase prices for seed cotton and cotton seed; cost recovery on inputs; the classing of cotton lint; and the timing and amount of final payment. Such distortions persist in most of the cotton-producing countries in the region. This is true even for those in which privatization and liberalization have proceeded quite far, such as Zambia, South Africa, Kenya and Burkina Faso. For those countries that are mid-way along the path—Benin, for example—distortions may temporarily worsen, because of confusion surrounding major policy decisions such as input procurement and seed cotton purchase prices. For those countries that have barely begun to privatize and liberalize, such as Mali, Tanzania, or Chad—distortions are quite evident.

Irrespective of the price situation, SSA cotton producing-countries need to recognize and resolve a broad range of technical and organizational issues that constrain productivity, competitiveness, and sustainability of their cotton economy. This report describes such constraints in considerable detail, and recommends possible interventions by USAID.

In addition to cotton itself, this document also analyzes the situation and outlook for the global and regional textile and apparel sectors, both of which can be huge contributors to economic output and trade, hence to employment and incomes. Although the focus is on Sub-Saharan Africa, the authors elected to consider the C-T-A complex for the entire continent, including Tunisia, Morocco, and Egypt, because what happens in North Africa directly affects the SSA countries. North Africa is a major competitor in the EU apparel trade. Egypt is also a major competitor in the cotton trade worldwide, especially for extra-long-staple (ELS) cotton lint and fine cotton cloth and garments. Yet for most SSA countries, particularly in West and Central Africa, the textile industry continues to be a “missing middle,” with a very uncertain future and little incremental investment in manufacture, dyeing, blending, or finishing of yarn or woven cloth. South Africa is the only vertically integrated C-T-A country, able to produce not just cotton lint, seed, and major by-products, but also yarn, woven cotton fabrics, and virtually the entire gamut of cotton-rich woven, knitted or crocheted apparel.

Major findings regarding the **export** of textiles and apparel from Africa include the following:

- In primary products, Egypt is the leading African player, but as one moves into textiles South Africa shows comparative advantage, while for apparel manufacture of all types Tunisia and Morocco have developed leadership positions that would be hard to displace.
- Egypt is strongest in cotton lint, but the main CFA producers Mali, Ivory Coast, Benin, and Mali, plus Zimbabwe in Southern Africa, form a powerful second group.
- Egypt is also the leader in yarns, which are largely made of cotton, but South Africa is a force as well, and Tunisia, Zimbabwe and Zambia have a strong presence.
- In man-made fabrics, after five years of growth Tunisia has taken the lead from Morocco, which seems to be stagnating in this segment, while South Africa has remained a strong third and Mauritius has had explosive growth in fourth place.
- In other woven fabrics, the only African players of consequence are now South Africa and Morocco.
- In knitted and crocheted fabrics, over the last 12-18 months Mauritius seems to have lost a substantial four-year long lead over South Africa.
- In lace and embroidery, South Africa is the most important player on the continent.
- For made-up articles, Egypt and Tunisia are three times as strong in terms of export value as South Africa and Morocco.
- For the two critical woven apparel categories, as well as the huge category entitled “articles of apparel not elsewhere shown”, Tunisia and Morocco are far ahead of SSA countries, although Mauritius holds a strong third position.
- For the two analogous knitted apparel categories, again Morocco and Tunisia are far ahead among African countries.
- Tunisia and Morocco have predominant shares of African exports of clothing accessories.

These findings confirm that SSA countries are not generally competitive in spinning, weaving, dyeing and finishing operations. It follows that the prospects for vertical integration throughout the C-T-A value chain, or across African countries, are not very promising. The problems that have contributed to a missing middle in the Sub-Saharan textile industry—small-scale spinning and weaving operations, high production costs per unit of output, a poorly trained and educated workforce, weak

textile engineering and industrial management capability, inadequate quality control, isolation from international markets and high transport costs--will continue to plague African producers in the future. As quota barriers come down, and as China continues to subsidize its textile and apparel production and export through credit rationing, deficit financing, and exchange rate controls, the long-run prospects for the SSA textile industry are not bright. Asian manufacturers, particularly China, will continue to expand their market share on the basis of cutting-edge technology fueled by cheap credit, low production costs, large-scale operations able to meet large order sizes quickly, reliability of supply, and efficient transport and communications with the outside world.

It is harder to make sense of **C-T-A imports**, due to data gaps and lack of differentiation between imports for local consumption and imports that are intermediate inputs into production of exported textiles and apparel. There are also no reliable sources of information on imports of used clothing, which is a significant industry in many SSA countries since it provides most clothing for many poor consumers. Nevertheless, some observations can be advanced regarding African imports.

- Between 1998 and 2002 five African countries imported more than \$100 million worth of lint each year: Mauritius, Egypt, Morocco, South Africa and Tunisia.
- Woven cotton fabrics present very large import values, especially for North African countries heavily involved in the open production system (OPS) with the EU. In 2002, for example, Tunisia imported \$708 million worth of cotton fabric, and Morocco another \$490 million.
- A similar pattern is evident for man-made woven fabrics. Morocco and Tunisia are in a class by themselves, with \$388 million and \$337 million in 2002 imports. Then South Africa stands out as the largest SSA importer, at the \$144 million level.
- The same leaders appear again in “woven textile fabric nes (not elsewhere shown)”.
- As far as knitted/crocheted fabrics are concerned, Morocco is by far the largest importer, with between \$156 million and \$179 million in value. Tunisia is again second, at \$61 - \$74 million. Again South Africa ranks third, at \$42-\$49 million per year.
- Tunisia, Morocco and South Africa lead in imports of quite a few additional textile products.

Not surprisingly, there is a strong correlation between the size of textile and apparel exports and the extent of imports of cotton lint, textile yarns, woven and knit cotton and man-made fabrics, trims, and accessories, all of which serve as intermediate inputs. Morocco and Tunisia stand out in many categories, first because of the strength of their apparel industries for export to the EU, and secondly for their dependence on imports of intermediate materials. Although South Africa is a strong producer of cotton and other fibers, it has a chronic need for imported textile and apparel inputs of all types. Mauritius, Lesotho and Swaziland do not produce, nor do they have much spinning or weaving capacity, so they are also highly dependent on external sources of cotton lint, yarn and fabric, as well as synthetic yarn and fabric, trims, and accessories.

Nearly all Sub-Saharan cotton-producing countries export substantial cotton lint and some by-products to other countries, some within the SSA region, but more to the EU. Cotton (category 52) exports for 2002 were valued at \$544 million, while textile and apparel exports (categories 60-63) amounted to \$2.123 billion.

Yet with respect to the U.S. market, virtually all C-T-A imports from SSA countries have been textile and apparel items, rather than cotton lint or derivatives. The report examines how African apparel producers have responded to preferences under the African Growth and Opportunity Act (AGOA), as amended through AGOA II and III. Although some 38 countries have been declared AGOA eligible, only a subset of these has actually focused on the production and export of apparel in general, and on AGOA-eligible exports in particular. The paper analyzes the importance of C-T-A exports (core categories) to the U.S. from AGOA-participating countries. According to OTEXA

data from the U.S. Department of Commerce, these exports reached about \$954 million in value in 2001, \$1.108 billion in 2002, \$1.505 billion in 2003. 2004 exports of AGOA eligible apparel products reached \$1.62 billion in value.

Based on the analysis summarized above, this paper presents a series of programmatic options for USAID consideration:

- Option 1: Support change in US farm policy with respect to cotton
- Option 2: Revise current USAID policy with respect to assistance for cotton
- Option 3: Intensify and expand USG development assistance to the cotton sector
  - a) Provide support for better governance and further privatization, liberalization, and structural reform of the cotton sector in selected countries
  - b) Strengthen the capacity of private organizations and key sector organizations to clarify their roles, better accomplish them, and better manage
  - c) Concentrate on improving technology generation and transfer systems during the transition toward privatization and liberalization, and afterward
  - d) Improve linkages between U.S. and African research organizations
  - e) Upgrade planting materials
  - f) Improve the enabling environment for agricultural bio-technology in general, and genetically-modified cotton in particular
  - g) Reduce high seeding rates, maintain seed quality, and improve the policy and regulatory environment for the seed system
  - h) Reduce uncertainty for farmers and costs for the cotton economy by expanding and improving financing for production, ginning and marketing
  - i) Help upgrade the production system
  - j) Arrest the deterioration of soil fertility and degradation of soil structure in a significant portion of the cotton producing areas
  - k) Work to improve input procurement, distribution and use
  - l) Expand the use of good agricultural practices
  - m) Reduce post-harvest losses and costs through better handling systems and practices
  - n) Upgrade ginning technology and practices
  - o) Support the creation and initial operation of a regional ginning school in West Africa, East Africa and/or Southern Africa
  - p) Reduce the level of contamination in cotton lint in target countries
  - q) Improve the utilization and marketing of cotton seed
  - r) Improve seed cotton grading and lint classing
  - s) Support niche cotton production and marketing
- Option 3: Concentrate on Textiles
- Option 4: Concentrate on Apparel
- Option 5: Improve the Enabling Environment

The stakes are high for the main stakeholders in the SSA C-T-A complex, not just the SSA countries themselves, but also for the United States and the EU, since the latter two have made strong commitments to supporting SSA economic development. Although progress has been made on all sides, and C-T-A exports have been increasing, significant additional development investment, policy change, industry re-structuring, and private initiative will be required for the region to realize its full potential in the face of the ATC phase-out and aggressive competitive moves from within Asia.

Over the last decade, the World Bank (and many other researchers) has done in-depth studies of the cotton complex in the SSA countries, at the supra-regional level, the regional level and the country level. Much of this work has focused on the structure and conduct of the sector, and on processes

of privatization and liberalization. In the view of the authors, neither the US Government in general, nor USAID in particular has any particular comparative advantage over the Bank in addressing such concerns. On the contrary, by virtue of not engaging in the cotton economy in most SSA countries over the past fifteen years, the USG and USAID are actually not in a very strong position to provide appropriate assistance.

On the other hand, the USG—via USAID and USDA especially—is extremely well positioned to provide assistance that seeks to raise productivity, competitiveness and sustainability. If the United States Government elects to change policy and target SSA cotton and associated downstream sectors for substantial development assistance, some mix of the technical interventions presented in this report is what will be required.

# **Analysis of the Global and African Cotton Economy in Relation to Proposed Multilateral Trade Reforms: *Implications for USAID Policy and Strategy***

## **1. Background**

Over the last two decades, the doctrine of economic liberalization has been accepted by most political, economic and industry leaders worldwide. As a result, the global trading system continues to move toward greater transparency and openness. Symptomatic of that trend is the fact that the WTO Committee on Regional Trade Agreements had received notification on 285 free trade arrangements by the end of 2003.

Although one-third of the 148 members of the World Trade Organization (WTO) are least developed countries, skeptics about trade liberalization voice great concern about the equity impact of liberalization, especially on LDCs, on rural areas, and on the agricultural sector. The supposed welfare benefits from freer trade do seem elusive when reports of increased poverty and hunger surface with some frequency, particularly in Sub-Saharan Africa and Latin America.

In the view of some highly vocal observers, farm policy in the European Union (EU) and the United States (US) continues to provide unfair advantage to their farmers and agribusiness interests. Critics argue that United States Government (USG) and EU support to the cotton industry in particular runs contrary to the principles of liberalization and free trade, and may even violate certain WTO agreements.

The outcry reached a crescendo after world prices for cotton lint reached a 30-year low in late 2001, not only because the absolute price level meant foregone income, but also because producers in the EU and US were largely protected from market risk, while cotton farmers in many developing countries that lack effective price support mechanisms were left fully exposed.

Change in such policies seems inevitable, but it will take time. Since the EU Common Agricultural Policy with respect to cotton benefits only three member countries (Greece, Spain, Portugal), not surprisingly adjustment there has already begun<sup>1</sup>, starting with partial decoupling. Meanwhile in the United States the nationwide cotton policies established in the 1996 and 2002 Farm Bills still stand, and the powerful US cotton industry seems reluctant to accept major changes.

### **1.1 The Brazilian Cotton Challenge**

In October of 2002, the Brazilian government formally challenged the subsidies through a request for consultation submitted to the WTO.<sup>2</sup> First, Brazil claimed that the US subsidies had resulted in increased US production, reduced world prices, increased US exports and market share, and thereby reduced Brazilian exports, market share, and earnings. Based on estimates by a well-known US agricultural economist, Brazil asserted that without cotton subsidies worth about \$2.6 billion, US cotton production would have fallen 29 percent in 2001 – 2002, and US cotton exports would have dropped 41 percent. Those decreases in turn would have led to a 12.6 percent bump

---

<sup>1</sup> <http://www.europa.eu.int/scadplus/leg/en/lvb/l11093.htm>

<sup>2</sup> United States – Subsidies on Upland Cotton: Request for Consultations by Brazil. WTO WT/DS267/1, October 3, 2002.



in international cotton prices. Brazil also asserted that the US subsidies distort trade and are substantially higher than 1992 US subsidies. Second, Brazil's case argued that the US Step 2 subsidies are export subsidies. Since the US did not have any cotton export subsidies in its GATT offer, the filing asserted that the US is not entitled to cotton export subsidies. The USG countered that the Step 2 subsidies are available to any user of US cotton, domestic or foreign, and thus are not export subsidies. Brazil countered that to the extent the Step 2 subsidies<sup>3</sup> serve to promote exports, they are export subsidies, and the US is not allowed to have them. Given those alleged violations, Brazil argued that the United States' program should not have protection under the so-called "Peace Clause," which urges countries to use appropriate restraint in challenging agricultural subsidies.

In April of 2004, an independent panel of trade experts assembled by WTO to review the complaint found mostly in favor of the Brazilian position. When their actual findings were published<sup>4</sup> on September 8<sup>th</sup>, 2004, they seem to have surprised both the USG and the US cotton industry.

The US Government appealed<sup>5</sup> on the 20<sup>th</sup> of October of 2004, arguing essentially that: (1) Article 10.2 of the Agreement on Agriculture (AoA) provides an exception for export credits from export subsidy commitments; (2) production flexibility contract payments under the 1996 farm bill and direct payments under the 2002 farm bill constituted "green box" support (i.e. not trade-distorting) because farmers could plant other crops besides cotton and still receive these payments; and (3) certain provisions of the US farm bill should be protected by the Peace Clause.

Yet on the 3<sup>rd</sup> of March of 2005, the WTO Appellate Body issued its final report<sup>6</sup>, which concluded that: (1) US export credit guarantees on cotton did indeed meet the definition of an export subsidy as defined in WTO rules and were prohibited since the US was not scheduled to provide any of them in its Uruguay Round commitments; (2) the Step 2 program violates the WTO Agreement on Subsidies and Countervailing Measures when it operates as a payment to domestic users of US upland cotton, and when it operates as a payment program to exporters of US cotton; (3) various U.S. payments, including direct payments, counter-cyclical payments under the 2002 farm bill, market loss assistance payments and production flexibility payments, granted support to a specific product (i.e. upland cotton); (4) the United States had indeed exceeded its negotiated limit on cotton subsidies; (5) certain provisions of the US farm bills did not warrant protection under the Peace Clause; and (6) US subsidies for cotton had injured Brazilian producers by dampening world market prices.

Also on March 3<sup>rd</sup> of 2005, the Dispute Resolution Body of the WTO issued a final ruling<sup>7</sup> based on the findings of the Appellate Body. It would seem that the final ruling will require the United States to change by July 1 of 2005 its cotton supports program to comply with WTO rules, by stopping the prohibited export credit guarantees and Step 2 payments and possibly by changing the use of marketing loans or loan deficiency payments. However, Congressional action in the

---

<sup>3</sup> See Annex B for an explanation of this and other key aspects of the 2002 Farm Bill

<sup>4</sup> WTO, United States - Subsidies on Upland Cotton - Report of the Panel, September 9, 2004.

<http://docsonline.wto.org/DDFDocuments/t/WT/DS/267R.doc>

<sup>5</sup> WTO, United States - Subsidies on Upland Cotton - Notification of an Appeal by the United States under Paragraph 4 of Article 16 of the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU). October 20, 2004. <http://docsonline.wto.org/DDFDocuments/t/WT/DS/267-17.doc>

<sup>6</sup> WTO, United States - Subsidies on Upland Cotton - Ab-2004-5 - Report of the Appellate Body, March 3, 2005.

<http://docsonline.wto.org/DDFDocuments/t/WT/DS/267ABR.doc>

<sup>7</sup> WTO, United States - Subsidies on Upland Cotton - Appellate Body Report and Panel Report - Action by the Dispute Settlement Body, March 3, 2005. <http://docsonline.wto.org/DDFDocuments/t/WT/DS/267-20.doc>

United States would be required to change the applicable laws and regulations. Informed observers predict changes in the way support for cotton is provided, and perhaps even some reduction in the aggregate measure of support. As of this writing, it is not clear what will occur next.

## **1.2 The Cotton Sectoral Initiative and WTO**

Strong criticism of the supposed price-dampening effects of US farm policy has been voiced by many African leaders as well, backed by influential international organizations like the World Bank<sup>8</sup> and Oxfam.<sup>9</sup>

The concept of a “Sectoral Initiative in Favor of Cotton”<sup>10</sup> was first introduced on April 20<sup>th</sup> of 2003, via a joint letter written by the four leading West African cotton-producing nations to the WTO Director-General. On June 10<sup>th</sup>, the President of Burkina Faso formally presented a joint reform proposal<sup>11</sup> to the WTO Trade Negotiations Committee, calling<sup>12</sup> for an end to subsidies, as well as a compensation fund to cover revenues foregone because of the collapse in world prices that allegedly resulted from US and EU farm policy. The President of Mali testified on the same topic in June before the International Relations Committee of the Subcommittee on Africa in the U.S. House of Representatives. The sectoral initiative was also discussed during the July 1<sup>st</sup> and 18<sup>th</sup> Special Sessions of the House Agriculture Committee. Just before the 5<sup>th</sup> WTO Ministerial held in Cancun in September of 2003, the West African cotton proposal again surfaced, in the form of a draft Conference document.<sup>13</sup> The sectoral initiative served as a rallying point for the so-called G-21 countries, and may well have contributed to the ensuing stalemate in WTO negotiations.

Concerned that cotton would continue to stand in the way of a framework agreement needed to further the greater purposes of the Agreement on Agriculture (AoA) and the Doha Agenda, for the next year and more the WTO, the EU and the USG worked both together and separately on trade and development responses that would help break the impasse in overall trade talks while dealing adequately with the specific challenges that agriculture and the cotton economy represent for Sub-Saharan Africa.

WTO’s most visible action in this regard was to organize the African Regional Workshop on Cotton,<sup>14</sup> held in Benin on March 23-24<sup>th</sup>, 2004. At that event, important discussions among shareholders and stakeholders occurred, both officially and otherwise. Delegates attended from 30 African countries involved in cotton production and trade, 18 multilateral intergovernmental organizations, plus Canada, Japan, China, and the European Union. The U.S. delegation included: the U.S. Ambassador to WTO, the Deputy Trade Representative, the USAID Assistant Administrator responsible for Economic Growth and Agricultural Trade (EGAT), a former U.S. Ambassador who was representing USDA, and the U.S. Ambassadors to Benin and Burkina Faso.

---

<sup>8</sup> Badiane, O. and D.Ghura, L. Goreux, P. Masson. “Cotton Sector Strategies in West and Central Africa,” World Bank Policy Research Working Paper 2867, July 2002

<sup>9</sup> “Cultivating Poverty: The Impact of U.S. Cotton Subsidies on Africa”, Briefing Paper 30, Oxfam International, 2003.

<sup>10</sup> <http://docsonline.wto.org/imrd/directdoc.asp?DDFDdocuments/t/tn/ag/gen6.doc>

<sup>11</sup> [http://www.wto.org/english/news\\_e/news03\\_e/tnc\\_10june03\\_e.htm](http://www.wto.org/english/news_e/news03_e/tnc_10june03_e.htm)

<sup>12</sup> At WTO site, see TN/AG/GEN/4 dated 16th May 2003 “Poverty reduction: sectoral initiative in favour of cotton”, TN/AG/GEN/6 dated 4th August 2003, and WT/GC/W/511 dated 22<sup>nd</sup> August 2003.

<sup>13</sup> [WT/MIN\(03\)/W/2](http://www.wto.org/english/whatis_e/tif02_e/whatis_e.htm) and [WT/MIN\(03\)/W/2/Add.1](http://www.wto.org/english/whatis_e/tif02_e/whatis_e.htm)

<sup>14</sup> <http://docsonline.wto.org/DDFDdocuments/t/wt/1/564.doc>

Participants in this WTO Workshop reached a preliminary consensus<sup>15</sup> on certain development priorities: continued sectoral reform; production-related support; improved use of commodity price risk management strategies; macroeconomic safety nets; support for quality control and standards; enhancement and support for cotton sector support services and product sector strategy development; export promotion and market support services; support for diversification and downstream value-added in textiles and apparel; establishment of Regional Programs for Cotton Technology, Research, and Capacity-building; and finally, support for the rehabilitation of textile and clothing mills.

Later, on August 1<sup>st</sup> of 2004, the WTO General Council adopted the so-called “July Package,” which was designed to better focus the Doha Agenda and in the words of the Director-General, to “raise it to a new level”. This agreement included a Framework for Establishing Modalities in Agriculture and a reaffirmation of the importance of the Sectoral Initiative on Cotton<sup>16</sup>. It also accepted that trade-related aspects of the Cotton Sectoral Initiative would be pursued in the agriculture negotiations, while the development aspects of the Initiative would be pursued by members and international institutions via multilateral and bilateral programs, with additional resources provided for economies where cotton has vital importance. At the same time a decision was taken<sup>17</sup> to establish a Cotton Sub-Committee, which was created in early November of 2004.<sup>18</sup> At its second meeting<sup>19</sup>, held in March of 2005, the Cotton Sub-Committee adopted its first work program.<sup>20</sup>

### 1.3 Other Relevant Development Initiatives

Many governments, donor agencies, and non-governmental organizations have long been involved in providing technical assistance, training, research, financial, and other kinds of support to the cotton sector in developing countries, particularly in Sub-Saharan Africa. However, the events of the last two years have served to stimulate renewed interest in this sector. That has been especially true with respect to the so-called Franc Zone countries of West Africa, which include the most vociferous producers (Benin, Burkina Faso, Chad and Mali).

In July of 2004, the European Union organized and sponsored in Paris the important EU-Africa Cotton Forum.<sup>21</sup> This widely-attended event<sup>22</sup> led to endorsement of a proposed EU-African Cotton Partnership<sup>23</sup> and adoption of an Action Plan,<sup>24</sup> which promised very significant funding (some incremental, some to be obtained by rearranging prior commitments). The Action Plan proposed to cover seven areas: (1) international trade; (2) national and regional strategies; (3) policies and institutions; (4) technological innovation; (5) risk management and finance; (6) chain integration; and (7) coordination. According to EU officials interviewed in West Africa, the hope is that this plan will help move Franc Zone countries as well as some Anglophone countries in the region toward an Economic Partnership arrangement, which is more or less analogous to the regional free trade agreement (RFTA) model that the United States is applying elsewhere.

---

<sup>15</sup> <http://docsonline.wto.org/imrd/directdoc.asp?DDFDdocuments/t/wt/l/564.doc>

<sup>16</sup> <http://docsonline.wto.org/imrd/directdoc.asp?DDFDdocuments/t/wt/gc/83.doc>

<sup>17</sup> [http://www.wto.org/english/tratop\\_e/dda\\_e/draft\\_text\\_gc\\_dg\\_31july04\\_e.htm#annexa\\_par4](http://www.wto.org/english/tratop_e/dda_e/draft_text_gc_dg_31july04_e.htm#annexa_par4)

<sup>18</sup> <http://docsonline.wto.org/imrd/directdoc.asp?DDFDdocuments/t/tn/ag/13.doc>

<sup>19</sup> [http://www.wto.org/english/news\\_e/news05\\_e/cotton\\_22march05\\_e.htm](http://www.wto.org/english/news_e/news05_e/cotton_22march05_e.htm)

<sup>20</sup> [http://www.wto.org/english/news\\_e/news05\\_e/cotton\\_22march05\\_e.htm#work\\_programme](http://www.wto.org/english/news_e/news05_e/cotton_22march05_e.htm#work_programme)

<sup>21</sup> <http://www.cotton-forum.org/indexflash.html>

<sup>22</sup> <http://www.cotton-forum.org/participants.html>

<sup>23</sup> <http://www.cotton-forum.org/docs/partenariat-en.pdf>

<sup>24</sup> <http://www.cotton-forum.org/docs/ActionPlanToImplementation-En.xls>

The EU also invited other development partners to join in their Action Plan for Cotton, by co-funding parts of it that might be of particular interest to each donor agency. As of this writing, it appears that official development assistance (ODA) from the French, German, and Danish aid organizations will support parts of the EU plan.

Even before the Sectoral Initiative was proposed, the USG itself had begun taking concrete steps to help improve the West African cotton sector, through a collaborative effort of the United States Agency for International Development (USAID), the United States Department of Agriculture (USDA), and the Office of the United States Trade Representative (USTR). Consistent with its longstanding commitment to improving the global trading system and climate, the USTR took the lead in negotiating an appropriate trade response with the WTO. Meanwhile USAID and USDA together began framing the American development response.

In late 2003, the USAID Africa Bureau commissioned an initial overview assessment of the cotton-textile-apparel situation and outlook, with particular emphasis on Sub-Saharan Africa.<sup>25</sup> At the same time, the Africa Bureau commissioned a legislative review<sup>26</sup> of the Bumpers Amendment and related policy directives that have generally been construed as limiting the possibility of USAID providing assistance to the cotton sector.

Then in early 2004, USAID/Mali and AID/W worked with the National Cotton Council of America to arrange participation by the Minister of Industry and Commerce of Mali at the annual Beltwide Cotton Conferences, along with senior officials from USAID and USDA.

Next USDA, USAID, Department of State, and the Burkina Faso Ministry of Agriculture together sponsored the “Ministerial Conference on Science and Technology to Harness Agricultural Production: West African Perspectives”, which took place in Ouagadougou from June 21<sup>st</sup> to 23<sup>rd</sup> of 2004.<sup>27</sup> The conference followed from the Presidential Initiative to End Hunger in Africa, the Water for the Poor Initiative and the Trade for African Development and Enterprise Initiative. Attended by more than 300 people, this event set the stage for possible future support in the areas of water management, biotechnology and bio-safety, public-private partnerships, and regulatory policies and frameworks, all of which are relevant to cotton.

During the Ouagadougou event, officials from USDA and the African Agricultural Technology Foundation (AATF) also signed a Memorandum of Understanding to share and disseminate agricultural technologies to improve African production systems, increase food security, reduce poverty, expand agricultural trade and commerce on a sustainable basis, and provide new opportunities for African farmers.

Then on the 24<sup>th</sup> and 25<sup>th</sup> of June of 2004, five US attendees traveled up-country in Burkina Faso to see firsthand the cotton producing area as well as some ginning and classing operations. This group included the Chairman of the Board of Directors of the National Cotton Council of America, two African trade specialists from USDA’s Foreign Agricultural Service participated, the Director of the Partnership to Cut Hunger and Poverty in Africa, and an agricultural development specialist with USAID.

At about the same time, the four main African cotton stakeholder countries also asked the USG

---

<sup>25</sup> N.B. This document represents an update of that original report.

<sup>26</sup> Reynolds, C., J. Lamb, and M. Kitay, The Bumpers Amendment: A Legislative Review, 2003.

<sup>27</sup> [http://www.fas.usda.gov/scripts/PressRelease/pressrel\\_dout.asp?Entry=valid&PrNum=0104-04](http://www.fas.usda.gov/scripts/PressRelease/pressrel_dout.asp?Entry=valid&PrNum=0104-04)

to: (1) provide technical assistance for the preparation and the holding of the next Regional Ministerial Conference on Science and Technology, which is to be held in Bamako, Mali in mid-2005; (2) provide assistance in the establishment of a Regional Center for Biotechnology in West Africa; and (3) establish a partnership between African and American research institutions.

Next, from July 17-24th, the U.S. Secretary of Agriculture arranged for the Ministers of Agriculture and Trade of Benin, Burkina-Faso, Mali and Chad and their respective Ambassadors to participate in a Cotton Industry Orientation Program that would enable them to see research, production, marketing and processing facilities in North Carolina, Tennessee, and Texas. The specific objectives of this trip were to: (1) visit cotton-growing areas similar to West African centers; (2) share information on the advantages of using cotton classing standards; and (3) explore mutual trade, investment, and capacity-building opportunities.

At the conclusion of the visit, participants met with the U.S. Trade Representative, the Secretary of Agriculture and other high USG officials, and presented a document entitled “Communiqué Issued by the African Participants at the Conclusion of the Cotton Industry Orientation Program”, which detailed the areas of assistance that their countries needed. African Ministers expressed strong interest in exploring use of biotech cottonseed. Their other priorities included:

- ◆ Assistance in scientific and technology research
- ◆ A bio-tech center of excellence
- ◆ Improving the access of African farmers to quality inputs at costs that will enhance the competitiveness of the sector
- ◆ Environment and conservation of water and soil
- ◆ Strengthening the capacity of the actors in the cotton sector
- ◆ Improvement of infrastructure
- ◆ Assistance in cotton processing
- ◆ Attracting foreign (i.e. U.S.) investment in the cotton-textile-apparel industries

Later in August of 2004, a USG interagency committee set up in Washington to follow up on the July 2004 Ministerial visit and respond to the communiqué decided to organize a high-level reciprocal visit to West Africa. However, this was to be preceded by a fact-finding mission to the four main cotton-producing countries, which came to be known informally as the West African Cotton Assessment. Actually, between October and November of 2004, several different technical missions were undertaken to Benin, Burkina Faso, Chad, Mali, and/or Senegal, comprising each time between 3 and 10 individuals of different specialties. A combined report was presented to USAID/Washington in early December of 2004. This report formed the basis for a high-level (USDA-USAID-USTR-National Cotton Council) trip to the region that took place in January of 2005.

Separate actions by the Millennium Challenge Corporation may also form part of the USG development response. Mali, Benin, Senegal, Madagascar, Mozambique, and Zambia were all selected as first-round Millennium Challenge countries in May of 2004. In early November, Burkina Faso was designated a “threshold country” for FY05. Millennium Challenge Account (MCA) funding could provide a much-needed boost to the cotton sectors of these Sub-Saharan countries, especially if significant resources are used for roads/tracks, ports, irrigation systems, or diversification (as Benin has apparently requested).

## 1.4 The Cotton-Textile-Apparel Complex

While the cotton sector itself has been the main focus of attention over the past two years because of the Sectoral Initiative, during an interview at the Cancun Ministerial, the U.S. Trade Representative explicitly called attention to cotton's downstream linkages, raising the possibility of a broader cotton/textile/apparel thrust.<sup>28</sup> Then at the AGOA Private Sector Forum held in Washington DC on December 8-9<sup>th</sup>, 2003, the Assistant U.S. Trade Representative for Africa raised the possibility of additional USG trade capacity building efforts aimed at vertical integration in the cotton, textile and apparel sectors. She and others apparently felt that this might be one way to deal with the eventual loss of the right to use third-country fabrics and yarns under the African Growth and Opportunity Act (AGOA) and also to improve Africa's competitiveness once the longstanding textile and apparel quota system is phased out.

Most cotton-related development research to date has focused on the cotton commodity system as conventionally defined, i.e. on input and credit supply, cultivation, ginning, and the marketing and export of the main derivatives, which are cotton lint, combed or carded cotton fiber, linters, cottonseed, cottonseed oil, and waste. Each of these products, and the end-markets they are destined to serve, certainly do form very important value chains that warrant development attention and support.

Yet the cotton economy in Africa involves much more. Cotton is typically grown in rotation with other crops such as maize, all within a complex farming system. Fertilizer use in cotton, and often fertilizer availability because of cotton, generate positive spillover effects on other crops. The revenues received from the sale of cotton often fund local community development and infrastructure projects. On the other hand, cotton production can also have negative externalities, such as increased erosion, decline in soil fertility, groundwater contamination, or pesticide abuse.

Because of backward, forward and horizontal linkages within the agricultural, manufacturing and service industries, the cotton-textile-apparel (C-T-A) complex broadly defined—which potentially comprises many other value chains---can have even greater economic and political importance for those countries that are able to compete in textiles or apparel. Thanks to multiplier effects, the C-T-A complex can greatly affect household and rural incomes, poverty, and food security as well.

While cotton lint and by-products may already generate a significant share of agricultural GDP and exports in USAID-assisted countries, cotton-rich apparel, knitted or woven cloth, hand-made fabrics, and handicrafts that use cotton cloth are all potentially significant export items as well. It follows that wherever cotton grows, the entire C-T-A complex should be taken into account as part of an agriculture-led, export-oriented economic growth strategy.

## 2. About This Report

The C-T-A complex is of particular interest to USAID's Africa Bureau for several reasons. First, under the President's Initiative to End Hunger in Africa (IEHA), selected USAID Missions have been asked to identify and development investment options that will stimulate smallholder-friendly agricultural growth needed to achieve the Millennium Development Goals of halving poverty and hunger in Africa by 2015. Various bilateral and regional missions in Sub-Saharan

---

<sup>28</sup> [http://www.ustr.gov/releases/2003/09/2003-09-09-transcript-pc-rbz\\_veneman.pdf](http://www.ustr.gov/releases/2003/09/2003-09-09-transcript-pc-rbz_veneman.pdf)

Africa are seriously considering cotton sector development within their IEHA Action Plans. Secondly, under the President's TRADE Initiative, which directly supports AGOA, Missions in Africa have also been asked to identify and develop investment options that will stimulate trade, whether within Africa or with major developed country markets, especially the United States. Cotton-based textiles and garments are a logical export development priority for the USG under TRADE and AGOA.

As noted earlier, in late 2003 the Africa Bureau decided to revisit the question of whether and how to support development within and surrounding the C-T-A complex. Issues surrounding the 1986 Bumpers Amendment, which prohibits assistance in the production of commodities that would compete directly in third-country markets with U.S. production, as well as other policy guidance concerning support for export promotion activities, were explored in depth in a companion report<sup>29</sup> that provides a legislative and policy review as well as statistical analysis of possible competition between U.S. and African cotton. The present report concentrates instead on the C-T-A complex as such, along with the global trading framework within which it operates.

## **2.1 Goal, Perspective, and Scope**

The main goal of the present analysis is to examine the cotton-textile-apparel complex in the light of impending multilateral trade reforms, so as to clarify policy, technology, trade and industry options and issues for USAID to consider, consistent with United States Government policy. Key contextual factors include: (1) the phase-out of the Agreement on Clothing and Textiles (ACT), which was successor to the better known Multi-Fibre Agreement (MFA); (2) on-going WTO negotiations concerning the Doha Agenda for Agriculture; and (3) relevant preference regimes such as AGOA I, II and III, and the EU-Cotonou Economic Partnership Agreement.

All major producing, exporting, and importing countries must be taken into account to understand the structure, conduct and performance of the cotton, textile and apparel industries, yet the analysis intentionally focuses on the situation and outlook for the cotton economy within Sub-Saharan Africa, particularly in the four countries that proposed the Sectoral Initiative (i.e. Benin, Burkina Faso, Chad and Mali).

Although not specified as such in the original scope of work, agreement was reached with AFR/SD after the work began, to have the study concentrate on the two extremes of the cotton pipeline: on the one hand raw cotton and its main derivatives (cotton lint, cottonseed cake, cottonseed oil, and linters), and on the other hand finished garments. This was appropriate because the Agency's likely objectives with respect to the C-T-A complex would be to enhance rural employment and incomes through cotton production or to generate jobs and foreign exchange through garment manufacture for export. Nevertheless, it was understood that intermediate processes such as spinning, weaving, dyeing and finishing would also be relevant in those countries currently or potentially capable of vertical integration.

## **2.2 Specific Purposes**

As noted in the Terms of Reference (see Annex A), the specific purposes within the scope of work were to:

---

<sup>29</sup> Reynolds, C., J. Lamb, and M. Kitay, *The Bumpers Amendment: A Legislative Review*, 2003.



1. Clarify the tariff lines to be included for purposes of this analysis in the “cotton cluster”, explaining why the cluster so defined is appropriate for USAID policy review.
2. Clarify the likely implications of the January 2005 expiration of the Multi-fiber Agreement/Agreement on Textiles and Clothing on the cotton cluster defined previously, with emphasis on developing countries as a whole and on Sub-Saharan Africa producers in particular.
3. Clarify and assess broad options for enhancing the competitiveness, productivity and sustainability of the cotton cluster in Africa. (This should include, at a minimum, biotechnology, other agricultural technologies, industry development, investment promotion and export promotion).
4. Clarify the impact of internal market distortions within Sub-Saharan Africa source countries, and review the types of reforms that might be encouraged to address them.
5. Clarify the implications of cotton cluster policy and program alternatives to USAID’s agricultural and trade support policies, strategies and programs.
6. Develop an overview synthesis paper suitable for use at the next AGOA forum.

In actuality, some of these purposes were slightly modified by mutual agreement during study implementation. For example, although the study did generate information that might be useful in supporting dialogue between USAID and its partners during the AGOA Forum held in Washington, DC in December of 2003, AID/W decided that the subject matter was too sensitive to warrant issuance of any paper during the Forum. That was because any early findings would not yet have been properly vetted within USAID or between USG stakeholder agencies. Instead an interim report would be prepared and submitted about that same time, for internal discussion purposes. Then in February of 2004 the study contractor was also asked to prepare a slide presentation for internal and/or interagency use at the working group level. Both the interim report and slide presentation are included on the CD that accompanies this final report.

### **2.3 Methodology**

Given resource and time limitations, the study was to depend exclusively on secondary data sources, taking into account all relevant analytical work done previously and relying on econometric models previously developed by ICAC for cotton and textiles, by USDA/ERS for cotton, and GTAP for agricultural trade. As needed, key informants in the private and public sectors in African countries, in the United States, and in the EU were to be interviewed and consulted. As it turned out, participation by the author in the so-called West African Cotton Assessment in late 2004 facilitated and enriched this final version of the report.

From the start, USAID/AFR/SD was to play the leading role in conduct and supervision of the study, but other stakeholder bureaus and units (especially EGAT, PPC and the LAC Bureau), as well as USTR, USDA/ERS, and the State Department were invited to review the findings as well.



### 3. The Economic Significance of Cotton

#### 3.1 Overview of World Cotton

About 65 countries grow cotton.<sup>30</sup> It is primarily a Northern Hemisphere crop, in that four Northern countries (China, United States, India and Pakistan) account for about 65% of global production. Only about 10% of the world's supply originates in Southern Hemisphere countries, mainly from Brazil, Australia, Zimbabwe, Zambia and South Africa.

As of 2004, the top five producing countries accounted for 72% of global supply, and their share has been trending gradually upward in recent years.

Over the past fifteen years, the area harvested has ranged from 30 to 36 million hectares (new high in 2004), which is about 2.5% of the world's arable land. At 9 million hectares, India accounts for 25% of the area, followed by the United States and PRC, each with 14%

Seed cotton is currently the eighth most important crop in the world in terms of area, with about triple the area dedicated to coffee.<sup>31</sup>

Between the 2000/01 and 2003/04 seasons, annual worldwide production varied between 19.3 million and 20.7 million MT. Again this is nearly three times as much as green coffee.<sup>32</sup>

World cotton production for the 2004/2005 season is estimated<sup>33</sup> at 117.7 million 480-lb bales (25.6 million MT), up 26% from the previous season. Sudan, Australia, Pakistan and Argentina showed increases in the range of 70 to 45%

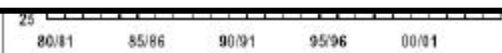
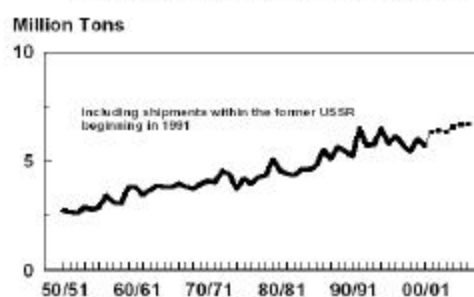
Imports have been trending gradually upward for decades, but leveled off during the past two years. For the 2004-2005 marketing year, USDA reports that global imports totaled 33.793 million MT, which equates to about 32% of global use. In the past two years, Chinese imports have skyrocketed to 9 million MT, which means a 26.6% import share. The top three importing

#### World Cotton for 2004/2005

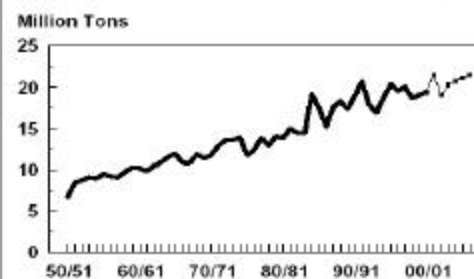
- **Area: 35.912 million hectares**
- **Production: 25.628 million MT**
- **Consumption: 23.109 million MT**
- **Exports: 7.312 million MT**
- **Ending Stocks: 10.353 million MT**

Source: USDA PS& D Database, Mar 2005

#### WORLD COTTON IMPORTS



#### WORLD COTTON PRODUCTION



<sup>30</sup> ICAC, 2003.

<sup>31</sup> FAOSTAT, March 2004.

<sup>32</sup> FAOSTAT, March 2004.

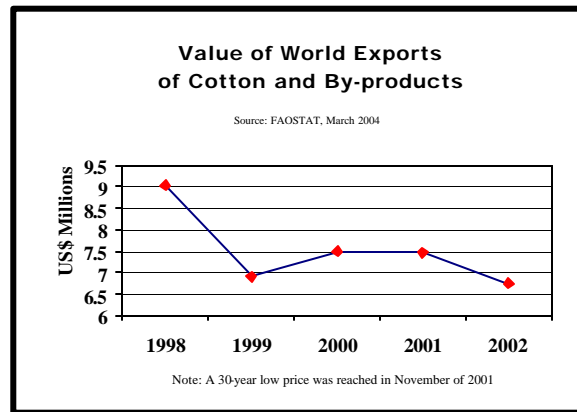
<sup>33</sup> USDA/FAS, Production, Supply and Distribution, March 2005.

countries account for 42% of global imports. The top eleven countries account for almost all the world's imports.

Since much of the demand for cotton has come from developed countries that lack the growing conditions needed to produce seed cotton, world tariffs on imported cotton are generally low. On an import-weighted basis, bound tariffs average 21%, but the average tariff actually applied is just 2.2 percent.<sup>34</sup> The most commonly applied tariff is 0%. Yet cotton is subject to non-tariff barriers in some important countries, so the GTAP (V5.2) CGE model assumes an 8% effective tariff.<sup>35</sup>

During the five-year period ending in 2002, the combined world export value of the seven main cotton derivatives (lint, carded/combed cotton, linters, cottonseed, cottonseed cake, cottonseed oil, and waste) averaged \$7.506 billion.<sup>36</sup> This represented 1.76% of world agricultural exports, which averaged \$425 billion between 1998 and 2002. Cotton's value share in agricultural exports has tended to decline over time due to a 40-year downward trend in real prices, coupled with the expanding role of higher-value products in agricultural trade. Yet cotton is still a very important traded agricultural commodity, somewhat greater in total value than coffee, whose export value was \$6.5 billion in 2002.

Before cotton is used in textile mills, about 30 percent of world consumption of cotton fiber crosses international borders.<sup>37</sup> Moreover, a large portion of the world's cotton supply crosses a border in the form of yarn, fabric and clothing, at least once more before it reaches the final consumer.



<sup>34</sup> MacDonald, S., "The New Agricultural Trade Negotiation: Background and Issues for the Cotton Sector", Cotton and Wool Situation and Outlook, USDA/ERS, November 2000.

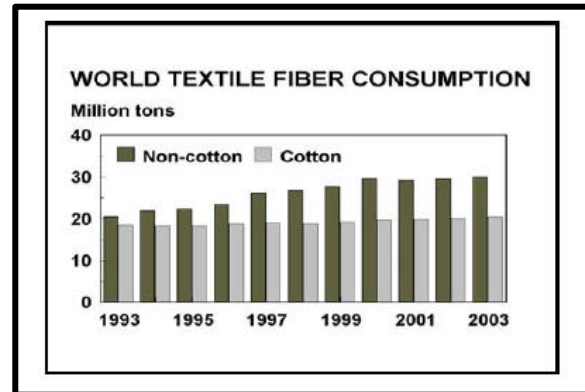
<sup>35</sup> MacDonald, S., L.Meyer, and A.Somwaru, "Perspectives on Cotton Global Trade Reforms", USDA/ERS, July 2003.

<sup>36</sup> *Idem.*

<sup>37</sup> MacDonald, S. "The New Agricultural Trade Negotiations: Background and Issues for the U.S. Cotton sector", Economic Research Service, USDA. November 2000.

Global exports for the 2004/05 cotton season are estimated at 33.6 million bales (7.3 million MT), equivalent to about 32% of use. This is somewhat less than the record 34% set in 2003/04. However, exports have been growing steadily for the past five years, successively setting a new record each time.

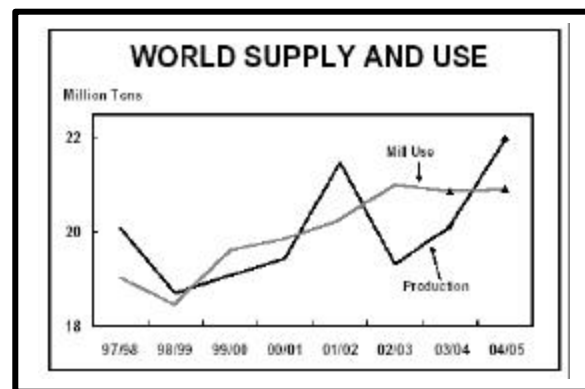
World demand for cotton has been growing slowly—just 0.7 percent annually during the last 15 years. ICAC projects future growth of cotton consumption to be about 1.8% per year, which is about the same as net population growth but less than the projected 2.4% growth rate for fibers as a whole. The main reason is that synthetics have been able to compete successfully against man-made fibers like cotton because of their price, consistent quality, and superior spinning characteristics for some uses. These advantages have helped force cotton's share of market to below 40% or below, as compared with 65% four decades earlier. According to IFPRI analyst Xinshen Diao,<sup>38</sup> lower costs of production of cotton, achieved through technological improvements and yield increases, have also contributed to the downward trend in prices. World average cotton yield has doubled in forty years, from 300 kg/ha in the early 60's to 600 kg/ha in the late 90's. Large-scale plantings in areas such as Mato Grosso in Brazil have benefited from greater economies of scale and widespread mechanization.



Economic shocks have also been a contributing factor. For example, the Asian financial crisis caused lint imports into Indonesia, Korea, and Thailand to fall after 1998. Since these countries accounted for more than 15% of world import demand for cotton lint, it was not surprising that global prices fell particularly fast in 1998 and 1999. The events of 9/11 also depressed demand for all merchandise, including cotton-rich textiles and apparel.

World cotton use for 2004/05 is forecast to be 106 million bales (23.1 million MT), up almost 8% from the prior year. This ran contrary to ICAC and USDA projections that supply would outpace use for the 2004/05 marketing year, as shown in the box.

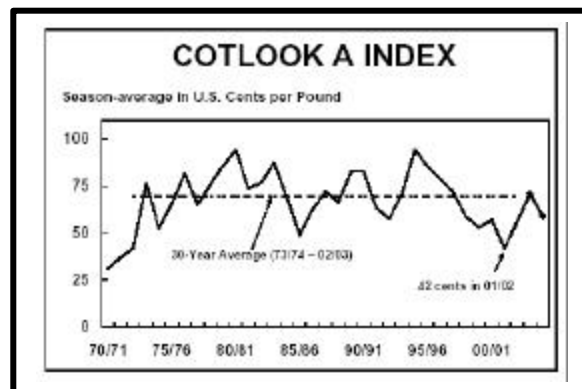
At the end of the 2004/05 marketing year, the world's ending stocks are predicted to jump from 35.8 million statistical (480-lb equivalent) bales to 47.6 million, which would be an historic high.



<sup>38</sup> Diao, X., "Growth Opportunities in the African Cotton Sector", November 2003

According to the International Cotton Advisory Council (ICAC),<sup>39</sup> the Cotlook A Index<sup>40</sup> spiked to more than 80 cents in late 2003. Yet the index averaged 68.3 cents for the entire 2003/04 season, is expected to average about 52 cents for 2004/05, and is projected at around 58 cents for 2005/06.

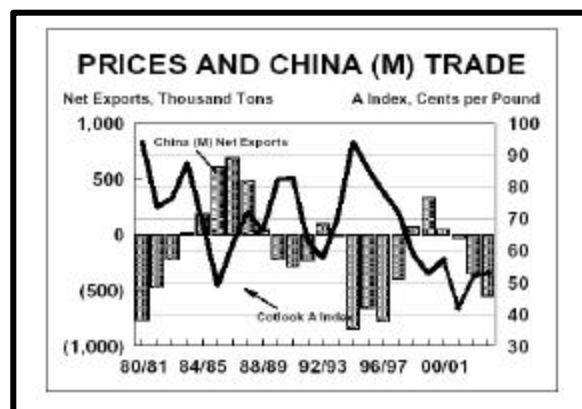
Cotton prices have displayed considerable volatility, both on a seasonal basis and between seasons. For a long time analysts used the 30-year average of about US\$0.70/lb as a benchmark, but the tendency in more recent reports is to use a figure closer to US\$0.62/lb, which finally recognizes the decline in real average prices that has occurred on the past decade.



While cotton consumption in the rest of the world is flat or declining, Chinese consumption has been growing for more than five years.<sup>41</sup> China is now the largest cotton user by far. It is expected to consume an estimated 37.5 million bales (8.2 million MT) during the 2004/05 marketing season, up more than 17% from 2003/04. At this level, China alone will account for 35% of world use.

Yet China is also the largest producer. Its 2004/2005 production is estimated to be 29 million bales (6.3 million MT), amounting to almost 25% of global output.

Finally, China is also the biggest cotton importer. To satisfy the needs of its burgeoning textile and apparel industry, for the 2003/04 season China had to import a record 8.8 million MT, which absorbed 25% of the world's total exports. The USDA forecast for 2004/05 is slightly higher.



For many years the United States was viewed as the price-maker in cotton, yet over the last decade China has actually become the main price-maker. As the text box shown at right reveals, prices rise each time that significant Chinese imports are expected, and the reverse is also true.

For obvious reasons, the International Cotton Advisory Committee (ICAC), USDA, the National Cotton Council (NCC), and many other organizations around the world devote considerable attention to analyzing what China is doing in cotton and to forecasting what it might do. World consumption is expected to outpace production in 2005/06 mainly because of China (and

<sup>39</sup> [http://www.icac.org/cotton\\_info/publications/press/2005/pr\\_march\\_05.pdf](http://www.icac.org/cotton_info/publications/press/2005/pr_march_05.pdf)

<sup>40</sup> The relevant price index for Sub-saharan cotton lint is Cotlook "A" NE. This index is an average of the 5 lowest quotations of 16 styles of cotton (Middling 1-3/32") traded in North European ports from these origins: Australia, Brazil, China, Francophone Africa, Greece, India, Mexico, Pakistan, Paraguay, Spain, Syria, Tanzania, Turkey, the United States, and Uzbekistan. The prices are expressed in U.S. cents per pound, c.i.f. North Europe, cash against documents on arrival of vessel, including profit and agent's commission.

<sup>41</sup> <http://www.cottoninc.com/MarketInformation/#wcc>

secondarily because lower prices this season mean fewer plantings next season).

In the Nineties, China played the role of exporter mainly when it had to dispose of excess stocks. For example, China exported an average of 108,000 MT each year between 1998/99 and 2001/02, which contributed to the 30-year low in cotton prices that occurred in November of 2001. The old rule of thumb was that China would hold about 30% of the world's inventory of cotton, although at one point it went as high as 50%. Yet more recently China's stocks have fallen to less than 8%. This has served to reduced uncertainty and therefore volatility in world prices.

The United States has long ranked second in global cotton production, yet even the record 2004/05 crop of 23 million bales is 20% less than what the People's Republic of China is producing. The latest U.S. crop reflected unusually high yields, as well as price and other types of support provided under the 1996 and 2002 Farm Bills.

Until the 2000/01 marketing year, the US ranked third in the world in cotton consumption, but use by U.S. textile mills has been falling since 1997/98. Domestic consumption is now one-third less than its highest point, and is expected to continue to decline<sup>42</sup> as the textile and garment industries contract in response to a lower cost structure abroad and higher production there.

On the other hand, high domestic cotton production and falling domestic consumption have fueled US exports, so much so that the country now has a dominant 40% share of global exports. US exports for 2003/04 reached a record of 13.8 million bales, almost 2 million above the previous season. That meant an export share of about 69 percent, the highest in more than 100 years.<sup>43</sup>

Of course, many other countries also matter for cotton. For example, India is currently the third largest producer and the second biggest consumer. The EU is the sixth largest producer, the fifth largest consumer, the second biggest importer, and the fourth largest exporter. Pakistan, Brazil, Uzbekistan, and Turkey are all major producers as well. Uzbekistan, Pakistan, Australia, Brazil and Mali all stand out as exporting countries. As far as consumption is concerned, other significant countries include Pakistan, Turkey, Brazil, Australia, and Mexico.

### **3.2 Cotton's Importance to African Agriculture**

Aside from the economic reasons described later, cotton is an important crop for African agriculture for various other agronomic and social reasons:

- ☞ It is a fairly forgiving crop that can be grown either with a low input/low output strategy, which is good for resource-poor farmers, or else as a high input/high output strategy, which is good for commercial farmers and agricultural productivity.
- ☞ Cotton is also the crop of last resort for farmers on marginal lands, which helps keep them alive but can be a mixed blessing because of environmental degradation.
- ☞ Cotton is the most drought-tolerant major cash crop in the region. Total failure of a cotton crop is less frequent than for companion food crops, including maize.
- ☞ Fertilizers and pesticides provided in-kind for cotton are often diverted partially to other food crops for which there is no production or supplier credit. This does lower potential cotton yields somewhat, yet at the same time it raises yields of maize especially.

---

<sup>42</sup> Goreaux, L., "Cotton After Cancun", OECD, March 2004.

<sup>43</sup> Cotton and Wool Situation and Outlook, USDA/ERS, March 11, 2004.

- ☞ Residual fertilizers and pesticides left over from a growth of cotton can have a positive impact on the next rotation crop.
- ☞ Farmers who grow cotton enjoy more price and payment security than for most crops.
- ☞ Moreover, since the cotton sector is not self-contained, but rather includes rotation crops for food and feed, it can generate positive externalities. (On the other hand, since cotton can cause environmental damage, particularly in the form of soil degradation and pesticide run-off, the potential negative externalities must also be acknowledged).
- ☞ Finally, because of the integrated system (*filière*) approach and State ownership, cotton revenues have paid directly and indirectly for considerable infrastructure (such as access roads, water supply and sanitation systems, dispensaries, community buildings) and social services (such as rural health and basic education).

About thirty African countries grow cotton. In all, seventeen produce at least one million statistical (480-lb) bales. Of these, Egypt and Sudan are the only ones located in North Africa. The other fifteen major producers are all in Sub-Saharan Africa.

### 3.2.1 Cotton in North Africa

The ICAC reports no cotton production at all for Libya, Algeria, Eritrea, or Djibouti. During the 2004/05 season, Morocco and Tunisia had negligible production.

Ethiopia planted some 60,000 hectares for 2004/05. This generated about 15,241 MT of lint output, apparently nearly of which was consumed in the domestic market. USDA reports no imports or exports for Ethiopia,<sup>44</sup> while FAOSTAT shows small amounts of exports.

Sudan planted about 200,000 hectares, nearly all of it in large-scale irrigation regimes in the North. USDA numbers<sup>45</sup> indicate actual production for this season of 114,306 MT, with no imports, and about 87,000 MT of exports. Sudan grows extra long staple, medium staple and short staple varieties.

Egypt grows only extra long staple (ELS), medium long staple (MLS), and long staple (LS) cotton, using locally developed *G. barbadense* varieties of world renown. These compete mainly with American Pima and other long staple cottons rather than short and medium staple Upland cottons, which are all *G. hirsutum* varieties.

During the 2004/05 season, Egypt planted about 307,000 hectares, all of it irrigated. Area planted there varies from year to year, depending mainly on price expectations and profitability as compared with alternative crops and rotations. For example, ICAC reports that a decade earlier Egypt planted 417,000 hectares and two decades back it planted 523,000 hectares. Nevertheless, thanks to 100% irrigation and relatively good yields, Egypt's total production during the 2004/05 season was 277,601 MT. Egypt also imported another 87,000 MT and exported almost 98,000 MT<sup>46</sup>

<sup>44</sup> USDA/FAS, Production, Supply, and Distribution, March, 2005.

<sup>45</sup> *Idem*.

<sup>46</sup> *Idem*.

### 3.2.2 Cotton in Sub-Saharan Africa<sup>47</sup>

According to USDA figures, the area harvested to cotton in Sub-Saharan Africa (SSA) during the 2004/2005 season was 5.225 million hectares.<sup>48</sup>

This was more than the area dedicated to cocoa beans, yams, plantains or dry beans.<sup>49</sup> It also continued an upward trend that began in 1993, and which has persisted despite recent price declines.

This past season, Burkina Faso seems to have displaced Mali for the first time as the leading SSA grower in terms of area, by a margin of 10,000 hectares. Tanzania's area harvested seems to have risen considerably as well, getting close to that of Mali.

Second-tier countries in terms of area include Chad, Uganda, Benin, Nigeria, Zimbabwe and Zambia, all with more than 300,000 hectares. The third tier consists of Ivory Coast, Cameroon, Togo and Mozambique. The rest of the SSA countries, which plant less than 100,000 hectares each, in effect form a fourth tier. Although a major consumer and importer of cotton lint, South Africa's own plantings have declined steadily since 1998/99, down to about 35,000 hectares.

The latest USDA figures peg overall production in the SSA countries for 2004/05 at 1.666 million MT. This equates to about 6.5% of world output. The West African countries typically account for 50-55% of the overall SSA crop.<sup>50</sup>

SSA cotton lint exports for 2004/05 amounted to 1.239 million MT, up from 1.072 million MT in 2003/04. Although prices fell steadily between 1997 and 2001, the total export value for Sub-Saharan Africa of the main cotton products and by-products still averaged \$1.205 billion annually. This represented 11.4% of the total average value of SSA agricultural exports, which amounted to \$10.561 billion during that period.<sup>51</sup> Since the beginning of 2002, cotton's share of SSA agricultural exports has been increasing further, due both to volume and price increases.

Given these numbers, obviously the SSA cotton sector makes a significant contribution to GDP and foreign exchange receipts at the country level. Various estimates suggest that 15 million people in SSA depend directly and indirectly on cotton.

#### **Snapshot of Cotton in Sub-Saharan Africa in 2004/05**

- **30 producing countries**
- **10 million growers**
- **4.78 million hectares**
- **4.013 million MT seed cotton**
- **1.666 million MT cotton lint**
- **1.239 million MT lint exported with a value of more than US\$1.2 billion**

#### **Top SSA Cotton Countries (2004/05)**

- **Burkina Faso – 550,000 hectares**
- **Mali – 540,000 hectares**
- **Tanzania – 500,000 hectares**
- **Chad – 425,000 hectares**
- **Uganda – 400,000 hectares**
- **Benin – 385,000 hectares**
- **Nigeria – 380,000 hectares**
- **Zimbabwe – 330,000 hectares**
- **Zambia – 300,000 hectares**
- **Ivory Coast – 260,000 hectares**
- **Cameroon – 220,000 hectares**
- **Togo – 200,000 hectares**
- **Mozambique – 155,000 hectares**

<sup>47</sup> Defined to exclude Sudan since its cotton production occurs mainly in the North.

<sup>48</sup> FAOSTAT, March 2005

<sup>49</sup> USDA/ERS, Cotton Situation and Outlook, October 2003

<sup>50</sup> *Idem.*

<sup>51</sup> FAOSTAT, November 2003.

Yet despite the growth in area planted and exports that has been occurring in the SSA region, effective demand for African cotton lint has been adversely affected by the shift in consumption toward Asia and developing countries, which tend to source more from the United States and Australia. In the EU, which is Africa's traditional main market, mill consumption has been falling as spinning capacity has shifted toward Asia.

### **3.2.3 Cotton in West Africa**

Since the main West African cotton producing countries spearheaded the sectoral initiative described previously, and they continue to be the focal point for US development assistance with respect to cotton, this region warrants special consideration throughout this report.

Historically the CFA (currency) countries (which include Madagascar in Southern Africa) countries have accounted for more than 45% of the total Sub-Saharan area. The eight "Franc Zone Area" (FZA) countries of West Africa together planted about 2.422 million hectares for 2003/04,<sup>52</sup> slightly more than the previous two years.

All together the so-called Cotton-4 countries had more than 700,000 MT of production for 2004/05. Mali's estimated lint output of 239,499 MT was the largest crop among SSA countries, closely followed by Burkina Faso with 232,967 MT. Benin reported 150,231 MT, while Chad had just 81,647 MT.

Although it has always been important, from the Nineties onward cotton began playing a crucial role in West Africa's economy and exports. It is the main cash crop and the most important source of export revenue for Benin, Burkina Faso, Chad and Mali. Cotton production amounts to between 5 and 10 per cent of the gross domestic product of these four countries. Cotton lint exports generate about 30 per cent of total export earnings and more than 60 per cent of earnings from agricultural exports. If combined, the cotton exports of these four countries would make them the third largest cotton export source, after the United States and Uzbekistan.

### **3.3 Cotton's Role in Global Textiles and Other Manufacturing**

Cotton has myriad applications. Demand for lint derives mainly from its use as a natural fiber in textiles and paper. Cotton textiles are utilized mostly in clothing, home furnishings, and industrial products. Cotton-based paper is used in fine stationery and in bank notes. Cottonseed is used for re-planting and as a vegetable oil for food and soap manufacture as well as human consumption. The hulls from cottonseed are used in animal feed. Linters (short fibers attached to the hull) can be removed, processed and then used in the manufacture of medical bandages, cotton swabs and balls, automotive upholstery and x-rays. The stalks from cotton plants can be used as mulch to improve soil organic matter.

Consumption of all fibers is rising as the world economy recovers from global slowdown and the impact of 9/11. The increased demand benefits both natural and man-made fibers.<sup>53</sup> World cotton consumption rose 1.6% in both 2002 and 2003, leveled off temporarily, then jumped 7% in 2004, reaching a new world record. Yet the long-term growth rate in cotton consumption is projected to be just 1.2% per year through 2010, for the reasons given below.

---

<sup>52</sup> *Idem*.

<sup>53</sup> ICAC, World Supply and Demand Outlook for Cotton, 2002.



Cotton's share of all fiber consumption fell fairly steadily between 1960 and 2000, from 68.3% to 40%. (During this same period the share held by wool fell from 9.9% to 2.3%). Man-made fibers (MMF) steadily gained market share against natural fibers, from 21.8% to 57%. Global production of manufactured fiber in 2002 was 36.0 million MT, an increase of 155% over the level twenty years earlier. From 1982 to 2002, manufactured fiber output grew at 4.8% annually.

Chemical fibers have some significant comparative and competitive advantages. First, their availability is not subject to the vagaries of weather. Secondly, they have desirable traits for some applications. Thirdly, they have become increasingly abundant and price-competitive. So even though cotton's global market share rose momentarily between 2001 and 2003 as the carryover stock was drawn down in response to rising prices, its volume share of market is expected to continue falling over time, to a projected level of 38.3% by 2010.

## **4. The Economic Significance of Textiles and Apparel**

### **4.1 Contribution to GDP**

Textiles and apparel constitute enormous, interdependent industries. In the United States, for example, gross value-added of the textile complex in 2001 was \$61.8 billion, broken down as follows: textile mills, \$18.8 B; textile products, \$12.9 B, apparel \$24.8 B; fibers \$4.5 B; machinery, \$0.8 B. It employed nearly one million people directly and indirectly, providing 6% of all manufacturing jobs.<sup>54</sup>

These industries can also be very important to developing economies. For example, India's textile industry directly employs 50 million people and at \$13 B generates 30% of the country's export value.<sup>55</sup> Industry sources report that South Africa's textile and clothing industry is the sixth largest employer in the manufacturing sector, as well as the eleventh largest exporter of manufactured goods, and the second largest source of tax revenue. It employs 230,000 people directly, plus another 200,000 indirectly through transport, packaging and other suppliers of goods and services. According to the Industrial Development Corporation of South Africa, every worker in the South African textile industry means 2.5 jobs in supporting industries.<sup>56</sup> The apparel sector in countries such as Lesotho, Swaziland and Mauritius that have taken advantage of AGOA also makes a major contribution to exports, employment, and income.

### **4.2 Contribution to Trade**

Global trade in textiles and apparel multiplied sixty six times during the past forty years, from under \$6 billion in 1962 to \$395 billion in 2003. Today textile and apparel trade represents nearly 5% of total world merchandise exports. About 130 countries are producing textiles and apparel for export. About 30 countries import significant volumes, but the U.S. and the EU remain the most important markets by far. The US is the largest importer in the world. Europe accounts for about 40% of world apparel imports, but half of that represents intra-EU trade. The more labor-intensive apparel export sector has grown more rapidly than textile exports (apparel has increased 128-fold, textiles 36-fold). Today apparel accounts for more than half (57%) of the total textile and apparel trade.<sup>57</sup>

---

<sup>54</sup> ATMI, "The Scope and Importance of the U.S Textile Industry", American Textile Manufacturers Institute, 2001.

<sup>55</sup> Shri Rana, Textile Minister of India, International Textile Bulletin, January 2003.

<sup>56</sup> Infomat, 2003.

<sup>57</sup> Yarns and Fibers, March 21, 2005.

### 4.3 The Global Trading Context for Textiles and Apparel

The January 2005 phase-out of the WTO Agreement on Textiles and Clothing (ATC), which ended a quota system set up four decades before under the Multi-fiber Agreement (MFA), was a tumultuous event whose full ramifications are still unknown but whose effects are clearly affecting all aspects of the C-T-A complex worldwide.

The phase-out ended a system of volume quotas for imports into the United States, European Union, and other major markets from certain countries that already dominated supply. At the end of the Uruguay Round, 16% of the import volume (based on 1990 quantity traded) was liberalized, then 17% more in January of 1998, another 18 % in January 2002, and the final 49% on January 1, 2005. Underlying tariffs were not changed with ACT phase-out.

While the ATC did encourage the growth of textile and apparel industries in some regions and countries, most observers agree that it also distorted the allocation of global resources, prevented more competitive countries from expanding their textile or apparel industries more quickly, raised costs and prices, and reduced economic efficiency and consumer welfare.

The likely ramifications of the ATC phase-out and other macro-developments are explored in detail in a separate discussion paper done last year and presented as Annex C.<sup>58</sup> As explained there, more than a dozen serious studies have been undertaken on the impacts of the on-going liberalization of trade in textiles and apparel. OECD produced a useful summary of the studies and their many differing assumptions and methodologies.<sup>59</sup> Most of the papers have used computable general equilibrium (CGE) modeling, generally using the GTAP database and analytical framework. While the numerical results differ enormously among the studies, the general directions foreseen are fairly consistent. Production and export of textiles and clothing is projected to expand significantly in Asia and other developing regions. In developed economies, production will decrease and imports will increase. The global welfare gains from liberalization are predicted to be positive. Most of the studies forecast annual global benefits in the \$20 to \$50 billion range, but some go as low as \$6.5 billion, and others as high as \$324 billion, depending on the data, assumptions, and analytical approach used.<sup>60</sup>

What is most significant for purposes of the present analysis is the probable impact of ATC completion on the cotton-textile-apparel complex in USAID-assisted developing countries, particularly within Sub-Saharan Africa. Consideration of that theme requires some additional background on what happened in the US and EU textile and apparel industries in the run-up to and aftermath of the so-called “Big Boom.”

In the case of the United States, industry players have long recognized that competitiveness is declining in the higher volume, cost-sensitive textile and apparel industry segments, and that the production of low-end products especially would inevitably move offshore toward countries that have lower labor costs and/or more recent investment in state-of-the-art facilities.

The U.S. trade deficit in textiles and apparel reached \$73.1 billion in 2004, up 8.7% from 2003,

---

<sup>58</sup> Tyner, W.E., J.Lamb, and D.Ethridge, “Analysis of Trade Policy and Framework Issues Important for Africa with Respect to Cotton, Textiles and Apparel”, Abt Associates Inc., November 2003.

<sup>59</sup> Peter Walkenhorst. “Liberalising Trade in Textiles and Clothing: A Survey of Quantitative Studies,” Working Party of the Trade Committee, OECD, May 2003.

<sup>60</sup> In most of the models considered here, welfare gains are defined as changes in equivalent variation, which is the economic value to consumers of the changes in prices and quantities consumed. Welfare measures are often but not always similar to changes in national income or GDP.

and it is rising fast. Many countries are contributing to the deficit by exporting more textile and apparel merchandise to the United States than they import, but China is the leader by far.

Chinese exports to the United States in 2002 surged 22% in value terms for textiles and 9% for apparel. Between 2003 and 2004, Chinese exports of yarn to the US increased 51% by value, while fabric rose 24%, made-ups 30% and apparel 23%.<sup>61</sup> For textile and apparel items not under quota, China's market share rose from 9% in 2001 to 53% by mid-2003. The U.S. industry remains very leery of what happened in Japan and Australia, where China now holds a 70 plus percent share of their quota-free textile and apparel markets. Thanks to a 90% increase in import value from China during the first half of 2003 alone, by mid-year China had managed to achieve a 16.3% market share in all textiles and apparel, which meant that it had surpassed Mexico for the first time as the largest exporter to the States.

Figures recently released by the U.S. Office of Textiles and Apparel (OTEXA), indicate that China doubled its textile and apparel exports to the United States in January of 2005, as compared to the same month a year ago. Taking advantage of cost savings associated with the end of quotas, in January of this year Chinese manufacturers reportedly lowered their prices an average of 22 percent compared to prices a year ago. This occurred even though China had promised that it would raise export taxes on shipments of textile and apparel goods as soon as the quotas ended.

In the categories where the U.S. textile industry filed threat-based safeguard petitions last fall, Chinese imports increased from 45 million square meter equivalents (SMEs) of fabric to 89 million SMEs.<sup>62</sup>

Shipments to the United States in some categories of clothing rose more than 1,000 percent in January. Imports of men's and boy's cotton trousers from China rose 990 percent, while those of women's and girls' climbed 1,081 percent. Cotton shirts for women and girls were up 523 percent. Official Chinese export numbers suggest that shipments of cotton knit shirts to the United States could actually be up more than 1,800 percent and cotton trousers up 1,300 percent from January 2004 to January 2005. The latter would mean January shipments greater than total imports of cotton trousers from China for all of 2004.<sup>63</sup>

China now has the world's largest trade surplus in both textiles and clothing. Its exports in these two industries grew from \$4.4 billion in 1980 to \$61.8 billion in 2002. It is widely believed that the underlying explanation for this trade growth is the Chinese government's aggressive involvement in financing, trading, and exchange rate policy. Industry spokesmen in the United States contend that unfair trading practices by China accelerated change and distorted the allocation of resources even before the MFA/ACT phase-out. The only import and export agency for raw cotton is still the China National Textiles Import and Export Corporation. The state trading system has been used to create barriers to trade and to practice discrimination among buyers or sellers. The main barriers to trade include tightened import licensing procedures, tariffs, value-added tax, and (at least until accession) export subsidies. In addition, the rapid growth in Chinese exports is reportedly fueled by massive investment at every stage of the fiber-textile-apparel chain, all supported by subsidized lending from state banks. For example, during the first two months of 2004, total fixed investment in textile and apparel manufacturing facilities was reportedly 6.2 billion *yuan*, up 144% in comparison with the same period in 2003.<sup>64</sup> Although

---

<sup>61</sup> <http://otexa.ita.doc.gov/tbrimp.htm>

<sup>62</sup> <http://deltafarmpress.com/news/050316-china-imports/>

<sup>63</sup> Idem.

<sup>64</sup> Yarns and Fibers, April 6, 2004

many textile and apparel companies are thought to be insolvent, or at least highly leveraged, often the banks do not call in non-performing loans, so industry expansion seems to continue without normal fiscal discipline. Meanwhile, the exchange rate against the dollar is considered undervalued by as much as 40%<sup>65</sup>, which makes Chinese exports of all kinds extremely competitive.

While cotton remains a key fiber input, over the past decade China's consumption of man-made fibers has actually risen six times as fast as for cotton, and its share in world consumption of polyester staple and filament yarns and polyacrylics is expected to double or triple by 2020, approaching half the worldwide requirement.<sup>66</sup> In an October 2003 speech<sup>67</sup>, a spokesman for the Chinese industry asserted that 90% of the growth in world fiber consumption since 1980 was attributable to increased consumption within China.

Alarmed by these trends and circumstances, the American Manufacturing Trade Action Coalition (AMTAC) filed in June of 2003 a first safeguard petition for selected apparel categories, arguing disruption of the domestic industry. Then in July, AMTAC sent a letter<sup>68</sup> to the White House, in which they asserted that more than 250 plants had closed since 1997 and that 271,000 direct jobs in the U.S. textile and apparel industry had been lost since 2001. A bipartisan group of congressmen followed up with another letter in October of 2003. On November 18<sup>th</sup> the Committee for the Implementation of Textile Agreements (CITA) in Congress approved the textile/fiber coalition's China safeguard petitions on knit fabric, brassieres and dressing gowns.

Since the use of such safeguards was foreseen and agreed to as part of the terms for China's accession to the WTO, more such actions covering other categories were to be expected. Indeed, during the last quarter of 2004, another nine requests were submitted, covering 15 descriptions and 17 categories.<sup>69</sup> Among others, these included: men's & boys' and women's & girls' cotton trousers; cotton and man-made fiber underwear; and combed cotton yarn. Once a safeguard is actually approved, the import surge will be limited to 7.5% growth, renewable each year until the overall right to safeguards expires in 2008. In the case of the EU, the general consensus seems to be that the application of safeguards allowed under Article 6 of the ATC is much less likely in the EU. Use of the safeguard clause seems inconsistent with current thinking of the EU, which recently issued a major policy document that sets forth a vision for increased competitiveness in the textile industry. Much of the EU industry (except in Poland, perhaps) is re-orienting toward higher-priced, higher-quality segments such as technical textiles, where import competition is less threatening. Moreover, the degree of foreign penetration of categories still under quota was already high prior to phase-out.

In sum, Chinese entry into WTO created the possibility of substantial, three digit percentage increases in Chinese textile and clothing exports that will probably occur eventually, even if safeguard measures slow up the process, at least for the United States. The recent phase-out of the ATC in 2005 is likely to result in substantial loss in textile and apparel industry jobs in less competitive developed and developing countries, including Sub-Saharan Africa. Elimination of the ATC quotas will also reduce welfare and the rate of increase in clothing exports from most AGOA countries unless exports from China are dampened through safeguarding, but even then

---

<sup>65</sup> Ernest H. Preeg, "Exchange Rate Manipulation to Gain Unfair Competitive Advantage: The Case Against Japan and China." Paper presented at a conference on the dollar at the Institute for International Economics, September 2002.

<sup>66</sup> Bruna Angel. PCI Fibres & Raw Materials, International Textile Bulletin, January 2003.

<sup>67</sup> Minister Du Yu-Zhou, Chairman of the China National Textile Industry Council, at a special forum on China held during the International Textile Machinery Association show in Birmingham, UK.

<sup>68</sup> <http://www.amtacdc.org/media/030707ltr.asp>

<sup>69</sup> <http://www.otexa.ita.doc.gov/chinare1dec1.pdf>

only selected categories will be affected, and those will not always be the ones of most interest to AGOA beneficiaries.

#### **4.4 Trade in Textiles**

Textiles are the tenth largest subcategory in global merchandise trade. As of 2003, they had a 2.3% share of value of all merchandise exports.<sup>70</sup> The value of all textile exports in 2003 reached \$169 billion, up 11% from the prior year. About half of the world's textile exports come from developing countries, and the percentage is rising as textile industries in the United States, the European Union and Japan contract. With a 44.3% share of value, the world's number one textile exporting region is Asia, followed by Western Europe at 39.3%, and North America with 7.8%. At 15.6% of all textile export value, the EU is the single largest textile-exporting bloc. Even without counting Hong Kong, China is the biggest exporting country by far and the fastest growing one as well.

According to ITC data, South Africa was the largest African textile exporter in 2002, at \$196 million in value. Tunisia was second, with \$127 million, and Morocco was third, at \$86 million. At \$752 million, the EU was Africa's largest market, followed by the United States with \$171 million in textile imports from the region.

In global terms, the EU-15 is also the largest destination bloc by a wide margin, with \$19.97 billion worth of extra-EU textile imports in 2003, and \$52.53 billion in total textile imports.<sup>71</sup> By contrast the United States imported about \$18.29 billion worth, followed by the People's Republic of China with \$14.22 billion, and Hong Kong with \$12.93 billion. Mexico imported \$5.43 billion worth of textiles in 2003, and Canada another \$3.86 billion. Six other countries surpassed the \$2 billion mark, but mostly due to temporary imports that would later be exported with additional value.

In 2002, Africa imported \$3.2 billion worth of textiles from Asia, \$3.6 billion from Western Europe, and less than \$100 million from North America. Within North Africa, Tunisia was the largest importer at \$1.407 billion, while Morocco was a close second at \$1.395 billion. Within Sub-Saharan Africa, the top importer was South Africa with \$534 million, while Mauritius came next at \$348 million. Imports for Mauritius are mainly for use in the manufacture of finished products for export. While that is also true for South Africa, RSA has a strong domestic market as well, particularly for household goods, i.e. "made-ups" such as bed linen and furnishings.

#### **4.5 Trade in Apparel**

Clothing is the ninth largest merchandise export subcategory in the world. The total value of clothing exports grew 12% in 2003 to the \$226 billion level.<sup>72</sup> This represented 3.1% of global merchandise exports. About 70 percent of garment exports come from developing countries. Asia was the biggest exporting region, with about 44.7% of the world market. Europe followed with an apparent 32.1% market share, but once intra-EU trade is factored out, its net exports were considerably lower. Mainland China has become the real leader, with a 23% share of all global garment exports, and Hong Kong accounts for another 3.6%, much of which probably originate in PRC. Within Africa, Morocco, Tunisia, Mauritius, and South Africa have been the largest apparel exporting countries, with \$2.8 billion, \$2.7 billion, \$967 million and \$303 million in value

---

<sup>70</sup> WTO, International Trade Statistics, 2004.

<sup>71</sup> Idem.

<sup>72</sup> Idem.

respectively in the year 2003.

At \$101.29 billion in value (\$60.93 billion in extra-EU imports), in 2003 the EU was the world's largest apparel importing bloc. At \$71.28 billion, the United States was the largest single country market for apparel, followed by Japan at \$19.49 billion, Hong Kong at \$15.95 billion, Canada at \$4.50 billion, Switzerland at \$3.93 billion, the Russian Federation at \$3.71 billion, and Mexico at \$3.03 billion. At \$541 million, Tunisia, and at \$339 million, South Africa, were the only African countries that appeared on WTO's list of major garment importing countries for 2003, but in fact the region imports much more than that. Used clothing alone is a significant import item for many SSA countries.

## **5. Getting a Handle on Africa's Cotton-Textile-Apparel Complex**

As Figure One on the next page shows, the fiber-textile-apparel system is complicated, and cotton is just one of the sources of raw material used.

Many in-depth studies of the African cotton sector have been carried out—whether on a supra-regional (i.e. Sub-Saharan<sup>73</sup>), regional,<sup>74</sup> or trading area (FZA<sup>75</sup>), national<sup>76</sup> or thematic<sup>77</sup> basis. The World Bank and DFID have been particularly active in this field. In addition, at a reconnaissance level, one regional<sup>78</sup> and various country-specific<sup>79</sup> diagnostic analyses of the “cotton-textile-apparel value chain,” plus an “impact of MFA phase-out” study have been carried out under the USAID-supported RATES project. Yet no one study, or program of studies, has been able to do justice to the entire C-T-A complex for even a single region of Africa, much less all of Sub-Saharan Africa. This is not surprising, given the vastness and diversity of the land, economies, and people, and the fact that the mix of cotton-based agricultural and manufacturing activities is quite different from one country to another. To further complicate matters, some SSA countries also have wool-based or synthetic fiber-based textile and apparel segments that interact with cotton.

The structure and conduct of cotton production, processing, transformation, marketing and trading varies greatly within the Sub-Saharan Africa region. Many SSA countries have concentrated on the production for export of primary products. These include: Burkina Faso, Burundi, Cameroon, CAR, Chad, Ethiopia, Ivory Coast, Guinea, Guinea-Bissau, Mali, Mozambique, Niger, Nigeria, Rwanda, Somalia, Sudan, Tanzania, Uganda, Zambia). Mostly the traded product took the form of cotton lint (whether carded or combed, or not), but Mali and Togo have also exported cottonseed, and Benin has also exported cottonseed cake. Other SSA countries have focused on the production and export of manufactured products, especially wearing apparel. These include: Botswana, Cape Verde, Kenya, Lesotho, Madagascar, Malawi, and Swaziland.

---

<sup>73</sup> Goreux, L. and J. Macrae, *Reforming the Cotton Sector in Sub-Saharan Africa*, World Bank, Africa Region Working Paper Series No. 47, 2003.

<sup>74</sup> Badiane, O., D. Ghura, L. Goreux and P. Masson, *Cotton Sector Strategies in West and Central Africa*, World Bank Policy Research Working Paper No.2867, 2002.

<sup>75</sup> Levin, A., *Developments and Outlook for Cotton in Francophone West Africa*. Paper presented at the Beltwide Cotton Conference, Orlando 1999.

<sup>76</sup> Baffes, J., *Tanzania's Cotton Sector: Constraints and Challenges in a Global Environment*. Washington, D. C., The World Bank: African Region, Working Paper No 42, 2002.

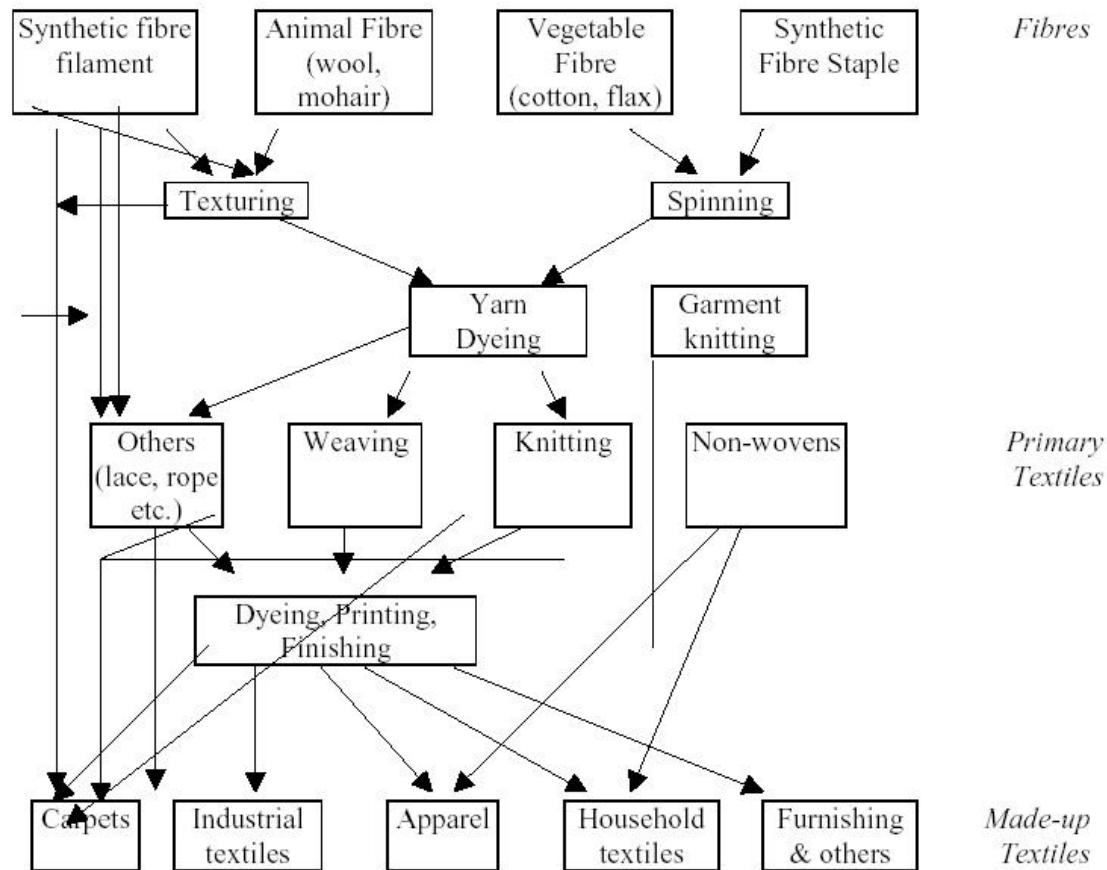
<sup>77</sup> Poulton, C., P.Gibbon, B. Hanyani-Mlambo, J. Kydd, M.N. Larsen, W. Maro, A. Osorio, D. Tschirley & B. Zulu, *Competition and Coordination in Liberalized African Cotton Market Systems*, forthcoming.

<sup>78</sup> Cockroft, J., [ESA] *Regional Market Assessment on Lint and Textiles*, Chemonics International, 2003.

<sup>79</sup> Ethiopia, Malawi, Tanzania, Kenya, Uganda, Zambia, Zimbabwe

**Figure One**

**The Fiber – Textile – Apparel Complex**



Source: Roberts, S. and J. Thoburn, “Globalisation and the South African Textiles Industry”, June 2002.

For most SSA countries, particularly in West and Central Africa, the textile industry continues to be a “missing middle.” Arguably the Republic of South Africa is the only vertically integrated C-T-A country, acting as cotton producer as well as producer and exporter of yarn, woven cotton fabrics, and virtually the entire gamut of woven, knitted or crocheted apparel.

Unfortunately the diversity of products and by-products that are cotton-based, or that just contain enough cotton to amount to significant volume, is so large that it is difficult to accurately capture relevant activity and performance indicators and then to carry out industry or economic analysis.

Cotton yarn is commonly blended with other natural or synthetic fibers, so some product categories that are cotton-rich subsume non-cotton fiber, and vice versa. Especially for non-apparel uses, cotton-rich fabric may be combined with non-textile items, and identity can get lost.

Which system of nomenclature and classification to use when analyzing different aspects of the cotton-textile-apparel complex is not a trivial matter. The main alternatives are the Standard

Industrial Trade Classification system, which was spearheaded by the United Nations, or the Harmonized Tariff Code System, which has been spearheaded by the United States since 1989. While the United States Department of Agriculture most often uses HS codes to analyze trade data for agriculture, the Office of Textiles and Apparel of the Department of Commerce still uses Revision 3 of SITC in many of its T & A reports. So policy analysis cannot be based only on tariff lines.

Even within the nine single-digit first-level sections of SITC, the various products of seed cotton and the main types of transformed products that derive from it still get spread across five one-digit sections.<sup>80</sup> Yet for many derivatives and applications of cotton, meaningful analysis based on SITC codes requires carefully selecting data that is buried in third-level groups and sometime even fourth-level subgroups.<sup>81</sup>

While SITC Revision 3 is limited to six-digit classifications, the Harmonized System offers ten-digit coverage, which permits quite specific descriptions of merchandise. The first six digits of the Harmonized System have become the international standard in most trade analysis, and they capture cotton and its by-products quite well.<sup>82</sup>

Yet many economic studies of the cotton, textile and apparel industries—including many GTAP CGE analyses done for Africa—are still being done with 2-digit HS categories. This can lead to insubstantial, misleading or even erroneous analytical results and policy recommendations. For example, Category HS52 is dedicated solely to cotton, yet Africa barely participates as a producer or exporter in many of its 4-digit subcategories. Since much of the data feeding into the broad-brush analyses is not limited to cotton as such, it is not particularly relevant to the African situation. That means that it is risky to draw firm policy conclusions for the African cotton sector from them.

Moreover, studies of the textile and apparel industries often aggregate the thirteen (HS 50 through HS 63) broad categories<sup>83</sup> of textiles and textile articles found in HS Section XI. While it is important to take into account the non-cotton categories because of substitution effects and blends, only one of those thirteen categories even mentions cotton in its summary description, so once again implications drawn about the cotton sector may be suspect.

There is really no way around the fact that the C-T-A complex is complicated. It could be fairly

---

<sup>80</sup> 0-Food and Live Animals; 2-Crude Materials, Inedible, 4-Animal and Vegetable Oils, Fats and Waxes, 6-Manufactured Goods, Classified Chiefly by Material; and 8-Miscellaneous Manufactured Goods

<sup>81</sup> For animal feed use, see 081.33. For cotton seed, 222.3. For lint, 263. For cottonseed oil, 421.2. For thread, 651.2. For yarn, 651.4. For woven cotton fabrics, 652. For made-up articles, see 658. For floor coverings, 659. For furniture, parts thereof (such as mattresses), 821.2. For articles of apparel and clothing, see 841 men's/boy's wear, woven; 842 women's/girls' clothing, woven; 843 men's/boy's wear, knitted or crocheted; 844 women's/girls' clothing, knitted or crocheted; 845 apparel, not elsewhere shown; and 846 clothing accessories.

<sup>82</sup> For cotton seed, see HS 120720. For linters, see HS 140420, for cotton, nor combed or carded, see HS 5201. For cotton waste, including yarn waste and garneted stock, see HS 5202. For cotton, carded or combed, see HS 5203. For cotton sewing thread, see HS 5204. For cotton yarn, see HS 5205 to 5207. For woven cotton fabrics, see HS 5208 to 5212.

<sup>83</sup> **50-Silk; 51-Wool. Fine or Coarse Animal Hair: Horsehair Yarn and Woven Fabric; 52-Cotton, 53-Other Vegetable Textile Fibres, Paper Yarn and Woven Fabrics of Paper; 54- Man Made Filaments, 55-Man Made Staple Fibers; 56-Wadding, Felt and Nonwovens; Special Yarns; Twine, Cordage, Ropes and Cables and Articles Thereof; 57-Carpets and Other Textile Floor Coverings; 58-Special Woven Fabrics, Tufted Textile Fabrics, Lace, Tapestries, Trimmings, Embroidery; 59-Impregnated, Coated, Covered or Laminated Textile Fabrics, Textiles Articles of a Kind Suitable for Industrial Use; 60-Knitted or Crocheted Fabrics; 61-Articles of Apparel and Clothing Accessories, Knitted or Crocheted; 62-Articles of Apparel and Clothing Accessories, Not Knitted Or Crocheted; and finally 63-Other Made Up Textile Articles, Sets, Worn Clothing and Worn Textile Articles, Rags**



said that knitted versus woven textile products are as different as grains versus fiber crops, and that sweaters and shirts are as different as fruits and flowers. Success or failure in both agriculture and industry can turn on what appear to outsiders as very fine distinctions.

Unfortunately the various tariff and industrial classification schemes described above continue to coexist, so analyses of the cotton, textile, or apparel industries or the C-T-A complex as a whole must be based on whichever system and set of data best fits the particular purpose. In the next section we examine cotton, textile and apparel trade from all of Africa. In the view of the author, this exercise is best done using 3-digit SITC codes because that is what the main information source (UN ITC based on the COMTRADE database) uses.

## **6. Overview of African C-T-A Trade Trends**

Although the focus of this study is on Sub-Saharan Africa, it is important to review North African trade as well, for several reasons. First, North Africa competes to some degree with the South, both for exports and foreign investment. Secondly, Egypt offers technology and lessons learned in cotton production, while Morocco and Tunisia have much to offer in textile and apparel manufacture. Thirdly, the North African textile and apparel industries could source more cotton lint from SSA countries. And lastly, manufacturing involving double or even triple transformation in two or three countries might make sense to the extent that wage or exchange rate differentials increase between North Africa and SSA countries, or within the SSA region.

### **6.1 African Exports to all Destinations**

For each of the major 3-digit SITC categories of relevance to the C-T-A complex, Appendix One presents detailed data on export value from all of the African countries reported by ITC for the period 1998 to 2002. Quantity data are available from ITC only in kilograms, which is not very useful for the textile or apparel industries. Therefore, textile and apparel volume is discussed only for AGOA exports, where data on millions of square meter equivalents is available from OTEXA at the U.S. Department of Commerce.

As far as **cotton (SITC 283)** is concerned, at \$331 million worth of exports in 2002, Egypt topped the list of all African exporting countries for most of the 1998-2002 period, and also ranked third in the world. This reflects its status as a major volume producer of highly priced long staple cotton that has achieved some differentiation (and therefore some premium) by source country. Depending on the year, Mali, Ivory Coast, Benin or Zimbabwe ranked second to fifth among African exporters. All five of these countries remained above the \$100 million level the entire time. Burkina Faso appears to have lost market share during this period, just barely staying ahead of Cameroon. Four of the top 10 world exporters of cotton lint in 2002 were from Africa. More than 25 SSA countries reported some exports of cotton: four more above \$35 million and an additional four above \$10 million in value.

With \$112 million in 2002 exports, Egypt was also the largest African exporter of **textile yarn (SITC 651)** for the entire five years, most of which is made with LS cotton and some made with ELS cotton. Although most Egyptian yarn exports are 100% cotton yarn, some blended yarn of cotton and synthetics is also exported. With \$85 million in 2002, South Africa was the second most important African exporter of yarn, followed by Tunisia with \$31 millions worth. In-depth investigation beyond the scope of this work would be needed to discover whether these two countries were/are using natural or synthetic fibers in their yarn exports, and which specific types of fibers.

With respect to **woven cotton fabrics (SITC 652)**, Tunisia held the lead in 2002 at \$47 million, followed by Mauritius at \$37 million and Morocco at \$35 million. South Africa, Egypt and Ivory Coast formed a third tier, with \$26-28 million each. Zimbabwe exported much less, about \$13 million. Only three other SSA countries surpassed \$1 million.

For **man-made woven fabrics (SITC 653)**, Tunisia and Morocco vied for first place throughout this period, with export value in the \$30 million range. South Africa came in third with about \$19 million in 2002, and Mauritius scored fourth with \$10 million in value. Kenya was the only other significant African exporter, managing \$2.5 millions in 2002.

During the period in question, Madagascar and South Africa were the only significant African exporters of **woven textile fabric, not otherwise shown (SITC 654)**, each with about \$4.5 million in export value for 2002. Exports from all other African countries were not significant.

As far as **knit/crocheted fabrics (SITC 655)** is concerned, at \$20 million Mauritius had held a commanding lead through 2001, but its exports fell to \$6.6 million in 2002, possibly because of the departure of a large foreign firm that was mentioned at the AGOA forum. Meanwhile, South Africa stayed level in the \$8 million range, which propelled it to first place in 2002. Tunisia and Zimbabwe each exported about \$2 million in 2002.

South Africa also held a strong first position in **tulle/lace/embroidery/trim (SITC 656)**, exporting between \$14 and \$18 million worth the past three years. Morocco maintained a second place throughout the five-year period, with \$6-\$8 millions in exports, while Tunisia stayed at about \$5-6 million. Egypt's exports jumped 700% between 2001 and 2002, to nearly \$4 million, while Mauritius continued steady growth at \$2.6 million. Apparently no other African countries compete in this export segment.

Again South Africa is by far the biggest African exporter of **special yarns and fabrics (SITC 657)**, reaching \$36 million in value in 2002. Tunisia grew into second place, with \$9 million, apparently followed by Ivory Coast, whose exports in this second seem to be falling. Tanzania was also a significant player through 2001, when it shipped more than \$6 millions worth, but data for 2002 is lacking. Egypt has also been significant, although its 2001 and 2002 exports in the \$3-4 million range were much less than what it shipped the previous two years. No other African countries showed much activity in this category.

The level of participation and competition in/from Africa with respect to **made-up textile articles (SITC 658)** is much greater. These include household items such as bed linen, towels, and curtains, as well as tents, sacks and bags. Not surprisingly, Egypt remains the leader here thanks to its "100% Egyptian Cotton" label on bed linen, yet its total exports fell from \$145 million to \$99 million between 2000 and 2002, probably because of the economic downturn in developed countries. Or this may have been just due to strong competition from number two exporter Tunisia, whose value rose from \$34 million to \$97 million those same three years. South Africa and Morocco appear to form a distinct second tier, each with about \$30 million in export value. Ivory Coast holds a strong fifth place, with \$18.5 million for 2002, followed by Zimbabwe and Kenya with \$8-\$10 million. Mauritius has also been exporting \$2-3 million per year. Eight other SSA countries did have some exports as well, but all less than \$1 million on total value.

In the category of **woven men's/boy's wear (SITC 841)**, Tunisia has long been the clear leader, with \$792 millions in exports for 2002. Morocco holds a strong second place, with \$567 million. Mauritius remains in third, with \$249 million in export value, but its share seems to be falling

over time. South Africa and Egypt vie for the next two slots, with \$85 and \$84 million respectively. However Egypt appears to be losing some market share over time. Although 2002 data for Lesotho are missing, in 2001 it exported \$62 million in this category, for a clear sixth position among African suppliers. Then Malawi, Zimbabwe and Mozambique form a cluster around \$20 million annually. Four other SSA countries export \$3-\$6 million per year.

With respect to **woven women/girls' clothing (SITC 842)**, Morocco has been the leader, achieving the \$850 million level in 2002. Tunisia followed at \$581 million. Mauritius is clearly the third largest African exporter, with \$153 million in 2002, and a fast growth rate. Next comes Egypt at \$36 million, South Africa at \$30 million, Swaziland at \$19 million, and Lesotho at \$8 million. Zimbabwe, Cape Verde and Malawi have also shipped several millions per year.

**Knitted or crocheted men's/boy's wear (SITC 843)** is again dominated by Morocco and Tunisia, with \$75 million and \$56 million in respective export value. Swaziland has been rising fast, achieving \$40 million in exports for 2002, more than double the previous year. Mauritius has remained steady at about \$40 million as well. Lesotho and South Africa compete for the next spot, each with about \$20 million worth of exports. Egypt, Zimbabwe, Mozambique, and Malawi are the other SSA players in this category.

Morocco also dominates **knitted or crocheted women's/girl's wear (SITC 844)**, with \$168 million in export sales for 2002, followed by Tunisia at \$78 million. Next comes a cluster around the \$25 million level, in which Swaziland, South Africa, and Mauritius compete. As of 2001, Lesotho was one step behind, with \$14 million in exports, but given the growth that is occurring, it is likely that Lesotho's 2002 figures brought it into the same cluster. Botswana, Malawi, Zimbabwe, Kenya, and Zambia have sometimes shipped several millions worth of product in this category, but unpredictably so.

The levels of exports and numbers of players are both greater in the case of **articles of apparel, not elsewhere shown (SITC 845)**. Here Tunisia dominates with \$1.128 billions in exports for 2002, displaying a consistent pattern of strong growth over five years. Meanwhile Morocco has remained in second place with consistency around the \$700 million level. Mauritius has also had a consistent participation in the \$425-\$475 million range. Then once again South Africa, Egypt, and Swaziland form a cluster at the \$65-\$80 million level. With \$38 million in value, Lesotho did well in 2001, the last year reported, and for 2002 probably shipped somewhat more. Botswana has been significant as well, achieving about \$12 million in exports in 2000 and 2001, but there was no data available for 2002. Another five SSA countries have been shipping \$2-\$5 millions, but sporadically.

Lastly, as far as **clothing accessories (SITC 846)** are concerned, Tunisia and Morocco also have a commanding lead, with \$37 million and \$33 millions in exports respectively for 2002. Then South Africa and Lesotho cluster around the \$7 million mark. Mauritius and Kenya has also shipped several millions in most of the recent years.

Some trends are evident even though reliable totals by country and category cannot be obtained from ITC because data is missing for some important countries (e.g. Mali and Chad) and for some years. **In value terms, for all of Africa the most important C-T-A export category is articles of apparel, nes (SITC 845)**, with more than \$2.5 billion worth exported in 2002. Woven men's/boys' wear (SITC 841) and women's/girls' wear (SITC 842) are nearly equal in second and third place, with about \$1.75 billion in export value. **Cotton lint (SITC 263) ranks fourth, with more than \$1 billion in exports.**

In primary products, Egypt is the leading African player, but as one moves into textiles South Africa shows more comparative advantage, while for apparel manufacture of all types Tunisia and Morocco have developed overwhelming positions.

Egypt is strongest in cotton lint, although the main CFA producers Mali, Ivory Coast, Benin, and Mali, plus Zimbabwe, form a powerful second group. Egypt is also the leader in yarns, which are largely cotton, but South Africa is a force, and Tunisia, Zimbabwe and Zambia have a strong presence.

In cotton fabrics, the first tier consists of Tunisia, Mauritius, and increasingly, Morocco. A second tier is formed by Tunisia, Egypt, Ivory Coast and possibly Madagascar. In man-made fabrics, through five years of growth Tunisia has taken the lead from Morocco, which seems to be stagnating, while South Africa has remained a strong third and Mauritius has had explosive growth in fourth place.

In other woven fabrics, the only African players of consequence are now South Africa and Morocco. Madagascar mysteriously vanished from the scene, possibly due to troubles in the country external to the industry. In knitted and crocheted fabrics, Mauritius seems to have lost a substantial four-year long lead over South Africa, while a handful of other African countries form a distant third group. In lace and embroidery, South Africa is the most important player on the continent, with twice the export value of Morocco and Tunisia, and 4-5 times as much as Egypt and Mauritius. South Africa also ships more than four times as much value in specialty yarns and fabrics, as any other African supplier, but Tunisia and Tanzania also have a position.

For made-up articles, Egypt and Tunisia are three times as strong as South Africa and Morocco, but many other SSA countries participate as well. For the two critical woven apparel categories, as well as the huge category entitled articles of apparel not elsewhere shown, Tunisia and Morocco are far ahead of SSA countries, although Mauritius holds a strong third position, and Egypt, South Africa, and Lesotho are also significant players.

For the two analogous knitted apparel categories, again Morocco and Tunisia are way ahead among African countries, but Swaziland, Mauritius, South Africa and Egypt all compete strongly as well. Finally, Tunisia and Morocco have predominant shares of African exports of clothing accessories.

## **6.2 African Imports from all Sources**

Appendix Two provides similar ITC data for imports of cotton, textiles and apparel by the whole gamut of African countries, both North and South.

For **cotton lint (SITC 283)** itself, in 2001 South Africa appears to have displaced Morocco as the leading importer, accounting for \$60 million in import value as compared to \$39 million for Morocco. Tunisia also remains a significant importer—in the \$25-\$35 million range. Although ITC does not offer data for Algeria for 2001 and 2002, FAOSTAT reports that it imported about \$14 million of lint and carded/combed cotton in 2002, on a par with Mauritius. Similarly, while ITC data is lacking, FAOSTAT reports that Nigeria imported \$4.6 million in 2002, in the same range as Egypt and Swaziland.

In the case of **textile yarn (SITC 651)**, between 1998 and 2002 five African countries imported more than \$100 million worth each year: Mauritius, Egypt, Morocco, South Africa and Tunisia, in descending order. Algeria was in the \$35 -\$50 million range. Ethiopia, Kenya and Zimbabwe

cluster at around \$10-\$15 million per year. Another four SSA countries imported more than \$5 million, and another dozen more than \$1 million.

**Woven cotton fabrics (SITC 652)** present very large import values, especially for North African countries heavily involved in the open production system (OPS) with the EU. In 2002, for example, Tunisia imported \$708 million worth of cotton fabric, and Morocco another \$490 million. A second tier consisted of Mauritius with \$95 million, South Africa at \$64 million, and Benin in the \$35-\$50 million range over the four-year period ending in 2001 (no data for 2002). There is a third tier as well, comprising Ghana, Tanzania, and Zimbabwe, all of which have imported between \$10 million and \$15 million per year. Eighteen more SSA countries imported between \$1 million and \$10 million annually.

A similar pattern is evident for **man-made woven fabrics (SITC 653)**. Morocco and Tunisia are in a class by themselves, with \$388 million and \$337 million in 2002 imports. Then South Africa stands out as the largest SSA importer, at the \$144 million level. The next concentration occurs around \$30-40 million, where Zimbabwe, Algeria, Sudan, Mauritius, Ethiopia and Benin can be found. After that, there is another grouping in the \$8-\$15 million range, which captures: Kenya, Swaziland, Ghana, Uganda, Malawi, Nigeria, and Senegal. Finally, another 14 SSA countries import more than \$1 million per year.

The same leaders appear again in **woven textile fabric nes (SITC 654)**. Morocco has long been at the top, with \$100 million worth of imports in 2002. Tunisia has been second, with between \$43 million and \$47 million annually. Next comes South Africa, at about \$10 million, and Egypt at about \$5-\$7 million per year. Zimbabwe, Lesotho, Malawi and Algeria then cluster around \$1 million.

As far as **knitted/crocheted fabrics (SITC 655)** are concerned, Morocco is by far the largest importer, with between \$156 million and \$179 million in value. Tunisia is again second, at \$61 - \$74 million. Again South Africa ranks third, at \$42-\$49 million per year. Swaziland has recently jumped ahead of Mauritius for fourth position, with \$40 million and \$27 million respectively. Algeria is the only other country above \$5 million, but Zimbabwe, Ethiopia and Malawi all import several millions worth of such fabrics as well.

Turning to **tulle/lace/embroidery/trim (SITC 656)**, Morocco and Tunisia again stand out above the rest of Africa, with \$93 million and \$69 million respectively for 2002. Mauritius ranks third at about \$20 million per year, and South Africa fourth at about \$10 million. Then Ghana, Egypt, Sudan, Nigeria, Senegal, Zimbabwe, and Lesotho all cluster around the \$2-\$5 million level.

In the case of **special yarns and fabrics (SITC 657)**, Morocco, South Africa, and Tunisia form a first tier of importers, in the range of \$75 - \$100 million per year. Egypt is a distant fourth at about \$30 million, then Ghana and Zimbabwe cluster around \$17-\$20 million annually. Another eight African countries import \$5-\$10 million of special yarns and fabrics each year, and nine more around \$2 million.

African country participation in **made-up textile articles (SITC 658)** is quite distinct. For most of the past five years Sudan has been the leader, reaching the \$35 million level in 2002. However, South Africa has been close, with \$32 millions in 2002. Tunisia, Algeria, Morocco and sometimes Ethiopia form the next tier, typically with \$10-\$20 million in annual imports. Another eleven SSA countries import \$6-\$10 million annually, and another seventeen between \$1-\$5 million.

In the category of **woven men's/boy's wear (SITC 841)**, Tunisia and South Africa are the largest importers, with \$64 million and \$56 million respectively in 2002. Ethiopia, Algeria, Botswana and Namibia form a second tier, in the \$10-\$20 million range. Ethiopia appears to have the fastest growth rate. Another five SSA countries import \$5-\$10 million annually, and an additional ten import from \$1-5 million each year.

With respect to **woven women/girls' clothing (SITC 842)**, the top four importing countries in Africa have been Tunisia, South Africa, Morocco, and Sudan, at \$45 million, \$35 million, \$24 million and \$17 million for 2002. Another five SSA countries have been in the \$5-\$10 million range, and seven more in the \$1-\$5 million range.

**Knitted or crocheted men's/boy's wear (SITC 843)** is led by Morocco and South Africa, each with \$11-\$23 million in imports, varying from year to year. In recent years Algeria and Namibia have been importing \$5-\$10 million each. Then another five African countries have imported \$1-\$5 million annually.

Morocco leads African imports of **knitted or crocheted women's/girl's wear (SITC 844)**, with \$33 million in 2002, closely followed by Tunisia at \$28 million. South Africa is third at about \$10 million per year, and Namibia fourth at about \$5 million on the average. Seven other SSA countries have been importing \$1-\$4 million annually.

In the case of **articles of apparel, not elsewhere shown (SITC 845)**, Tunisia holds a strong lead in the \$220-\$225 million range. Morocco has been consistently in second position in the \$100-\$140 million range, and South Africa consistently third at more than \$50 million per year. Algeria, Mauritius, Namibia, Guinea, Lesotho, and Botswana import from \$5-\$10 million each, and another ten SSA countries bring in \$1-\$5 million annually.

Lastly, for **clothing accessories (SITC 846)**, Tunisia is the largest importer by far at \$164 million, followed by Morocco at \$29 million. South Africa, Lesotho, Mauritius, and Namibia form a second tier with \$5-\$10 million each. Another seven SSA countries import from \$1 million to \$5 million of accessories annually.

Again some trends are evident despite imperfect data coverage. **Not surprisingly, there is a strong correlation between the size of textile and apparel exports and the extent of imports of cotton lint, textile yarns, woven and knit cotton and man-made fabrics, trims, and accessories.** Morocco and Tunisia stand out in many categories, first because of the strength of their apparel industries for export to the EU, and secondly for their dependence on imports of intermediate materials. Although South Africa is a strong producer of cotton and other fibers, it has a chronic need for imported textile and apparel inputs of all types. Lacking any production of cotton, and having little spinning or weaving capacity, Mauritius, Lesotho and Swaziland are also highly dependent on external sources of cotton lint, yarn and fabric, as well as synthetic yarn and fabric, trims, and accessories. Despite its strength as a cotton producer, Egypt has also had to import substantial amounts of yarn, and in some years even cotton lint (of shorter staple length) as well as woven or knitted cotton fabric (of moderate quality). The entire region seems highly dependent on imports of specialty yarns and fabrics. Finally, despite its strong cotton production, West Africa and Southern Africa must import substantial quantities of woven and knitted/crocheted cotton and other fabrics.

## **7. EU Policies, Trade Agreements, Preference Arrangements that Affect C-T-A**

Although the scope of work requested consideration of the EU Cotonou Economic Partnership Initiative alone, there are really three major EU-related topics that have an impact on cotton, textiles and apparel in Africa.

### **7.1 European Union Common Agricultural Policy**

In the late 1950s, when six European Countries first federated themselves into the European Community, their economies had a food deficit. For that reason, the initial Common Agricultural Policy (CAP) was heavily production-oriented. CAP sought to raise farmers' income by a system of (a) target prices, related to specific commodities; (b) levies that would keep the import price above the target price; and (c) intervention prices that would be fixed below the target price and then used to buy and store a fraction of the domestic supply when it was so abundant that a price decline could occur. This scheme strongly encouraged output increases, so much so that in less than three decades, EU agriculture overcame the deficit and accumulated large surpluses. Yet CAP has long been criticized from non-EU countries for distorting markets and resource allocation, and from within the EU because of its high costs (sometimes amounting to three quarters of the Community budget) and negative environmental impacts.<sup>84</sup>

As explained in a recent EU document, the cotton regime currently involves direct aid on a per ton basis for un-ginned seed cotton, subject to a National Guaranteed Quantity (NGQ) for each Member State. The level of the aid, granted to processors, who pay a minimal price to producers, is fixed periodically on the basis of the difference in a "guide price" and the world price. Since 1995/96, the "guide price" has been fixed at €1.063 per ton, with a minimal price of €1,009.9 per ton. The NGQ is fixed at 782,000 tons for Greece, 249,000 tons for Spain and 1,500 tons for other Member States (i.e. Portugal). Adjustments can be made to the amount of aid paid out if production exceeds or falls short of the guaranteed quantities.

The cotton sector contributes just 0.5 % to the EU's final agricultural output. Yet cotton has considerable regional importance, especially for Greece, which generates 79.4 % of the total EU production of 1.55 million tons of raw cotton. Cotton accounts for 9 % of the final agricultural output of Greece, as compared with 1.5 % for Spain, which is the other major producing country. After peaking at 440,000 ha of land planted to cotton in 1995, Greece now plants 380,000 ha. Spain peaked at 135,000 ha in 1988, and now plants only 90,000 ha. Although not insignificant, these areas mean that the EU is actually a minor supplier of cotton, accounting for just 2.5 percent of the volume of global production, which is 19.9 million MT. On the other hand, with consumption of about one million MT (5.4 % of the world) and 708,000 MT of imports, the EU is definitely a major world importer. Consumption is mostly concentrated in Italy, Portugal and Germany. The EU exported just 227,000 MT of ginned cotton last year.

As noted by the comprehensive impact assessment commissioned by the EU as a prelude to reform, the main factor contributing to the 40-year downward trend in cotton prices has been increased competition with synthetic fibers. The EU report also concluded that policies of both other developed and some developing countries have had a more significant effect on world cotton prices than the Common Agricultural Policy. The report contends that because the EU is a

---

<sup>84</sup> Bonazzi, M., and Gómez y Paloma, S., CAP and the Euro-Mediterranean Free Trade Area: Regional Lessons, The IPTS Report, Volume 125, 1997

marginal producer of cotton, does not use export subsidies, and provides duty free access for cotton, the production subsidies provided by CAP do not significantly affect world prices. Yet outside observers often disagree. For example, during the 2001-02 season, producer prices in Greece were almost 145% higher than world prices, and 185 percent higher in Spain.<sup>85</sup> Greek lint does compete with West African cotton in certain markets, such as Egypt, where its proximity is an advantage.

In any event, the CAP situation is undergoing change. The EU cotton regime, which began when Greece acceded in 1981, was modified in 2001 to strengthen the price reduction mechanism so as to exert more budget discipline, and also to limit the total area dedicated to intensive cotton production, in order to reduce environmental problems. Despite the adoption of these new measures, the intended reductions in area did not occur, and seemed difficult to implement, so in the latter half of 2003 the EU Commission requested the above-mentioned re-appraisal of the cotton sector arrangements, with a view to introducing more effective and sustainable policies.

Since 1992, CAP reform has progressively shifted away from price and production support toward direct payments and farmer income support, with a view toward reducing surpluses and lowering the budgetary burden. The last step in this process was the decision reached at the Luxembourg Council on 26 June 2003 regarding the 2003 CAP reform. For all products, the main feature of CAP in the future will be the single farm payment, applicable from 2005 onward. This will sever the link between eligibility for direct payments and the production decision. This policy shift—known as decoupling--will increase the transfer efficiency of the direct payment as an income support mechanism significantly, was designed to improve the income situation of farmers.

In its *Communication From The Commission To The Council And The European Parliament Accomplishing A Sustainable Agricultural Model For Europe Through The Reformed CAP* (September 2003), the Commission concluded that:

”The economic, social and environmental benefits of a reform to the EU cotton sector, based on the June 2003 Reform approach, would far outweigh the disadvantages. For that reason, the Commission proposes to transfer the part of the EAGGF expenditure for cotton, which was destined to producer support during the reference period, into the funding of two producer income support measures, namely, the single farm payment scheme and a new production aid, granted as an area payment... It is proposed that 60 % of that producer-support expenditure, per Member State, would be transferred to the single farm payment scheme, in the form of new entitlements...the Commission believes that, in addition to the significant decrease in trade distorting subsidies already proposed by the EU in the Doha Development Agenda, such a reform could help alleviate the rather complex problem of the level of the world market price for cotton by shifting support away from the current deficiency payment mechanism, towards a mix of blue and green box measures. Nevertheless, in view of the appreciable risk of production disruption, the Commission proposes that Member States will retain 40 % of the producer-support expenditure, during the reference period, as national envelopes, for the granting to producers of the new area, payment per hectare of cotton, in zones suitable for that crop.

---

<sup>85</sup> Zongo, Tertius, Ambassador of Burkina Faso to the United States, “Cotton, Sugar and Groundnuts: A Political Economy of Credibility”, Trade Flows: Comparative Research on Subsidies in Europe and the Us and their Effects on Developing Countries, May 15-17, 2003



Council Regulation (EC) No [864/2004](#) of 29 April 2004 did amend Regulation (EC) No [1782/2003](#), thereby establishing common rules for direct support schemes under the common agricultural policy, which included cotton.

The level of the new area payment has been fixed in order to allow cotton production to continue, on a reduced area than at present, with a gross margin similar to that of competing crops...The new area payment will be subject to a maximum area of 440360 ha (370000 ha in Greece, 70000 ha in Spain and 360 ha in Portugal). The maximum areas are designed according to the rates of past developments in cotton areas and correspond to 11% less than the areas in the reference period for Greece and 5% for Spain.”

While the decoupling of 60% of allocated expenditures for producer supports in cotton was generally viewed as a step forward, some observers within the EU and many abroad felt that full decoupling would send a stronger signal to the world that the EU was serious about liberalization of agriculture. Given that 2002/2003 subsidies to EU cotton were budgeted at 870 million Euros, it would indeed seem that the percentage of decoupling does matter.

## **7.2 EU-Mediterranean Free Trade Area and Partnership Agreements**

At the Euro-Mediterranean Conference held in late November of 1995, EU and country representatives agreed to create by 2020 an area of shared prosperity, to be called the Euro-Mediterranean Free-Trade Area. The resulting “Barcelona Declaration” stipulated among other matters that “with a view to developing gradual free trade in this area, tariff and non-tariff barriers to trade in manufactured products will be progressively eliminated in accordance with timetables to be negotiated between the partners; taking as a starting point traditional trade flows, and as far as the various agricultural policies allow and with due respect to the results achieved within the GATT negotiations, trade in agricultural products will be progressively liberalized through reciprocal preferential access among the parties...” Thus the Free-Trade Area envisions free trade in manufactured goods and progressive liberalization of trade in agricultural products. The FTA is intended to interconnect the 15 EU Member States and the 12 Mediterranean Partners. Together with EFTA and Central and Eastern European candidate countries for EU enlargement (CEECs), eventually the resulting zone would include about 40 States and 600-800 million consumers, which would make it one of the world’s most important trade entities.

In the pursuit of this vision, the European Commission has been preparing, negotiating, and implementing Association Agreements with each partner country. The first generation of Agreements covered Turkey, Cyprus and Malta, resulting in a customs union with the EU. The new generation of Euro-Mediterranean Association Agreements provides for the gradual implementation of bilateral free trade. Negotiations for Agreements already concluded include those with Tunisia (1995), Israel (1995), Morocco (1996), Jordan (1997), Egypt (1999), Algeria (2001), and Lebanon (2002). Those with Tunisia, Morocco and Israel have been ratified and are in force. Negotiations with Syria are at a less advanced stage. At the same time, the Commission continues to implement five Cooperation Agreements, which the European Community concluded in the mid-1970s with Algeria, Egypt, Jordan, Lebanon and Syria. The combination of free trade agreement, customs union, and technical cooperation agreements brought significant advantages to participating countries. Although impossible to quantify, some portion of North Africa’s success in textile and apparel trade with the EU is attributable to these free trade and partnership arrangements, the equivalent of which most Sub-Saharan countries do not have.

## 7.3 EU Preference Arrangements for Less Developed Countries

### 7.3.1 Everything-but-Arms Initiative

In February of 2001 the General Affairs Council of the European Commission adopted the "Everything but Arms" (EBA) amendment to the EU's Generalised Scheme of Preferences (GSP), which took effect on March 5, 2001. EBA extends duty and quota free access to all products originating in LDCs, except arms and ammunition. Cotton is included, although it was already duty free under the GSP. Most SSA countries are on the UN list of 48 LDCs. Many are also on the list of 36 ACP countries, which were already benefiting from the EU-ACP Cotonou Agreement.

### 7.3.2 EU Cotonou Economic Partnership Initiative

(Note: For the sake of accuracy, the following draws heavily on the February 12, 2004 EU press release<sup>86</sup>, but with some synthesis, paraphrasing, and reformatting)

In February of 2004, the European Commission recently adopted an action plan to help developing countries fight agricultural commodity dependency in general, and in particular to support the development of the cotton sector in Africa. The plan consists of various initiatives to help developing countries enhance their export performance, improve the income of commodity producers in developing countries, and reduce producers' and states' income vulnerability to price fluctuations.

The Commission's action plan identifies six major areas of intervention:

**Putting the commodity problem on the agenda:** support commodity-dependent developing countries (CDDCs) in elaborating comprehensive commodity strategies covering critical parts of the commodity chain and fully integrating these in their overall poverty alleviation policies. The EU should also play an active role in reforming the international commodity bodies, making them more receptive to development concerns

**Responding to price decline :** support the implementation of commodities strategies. In the context of the on-going negotiations for Economic and Partnership Agreements (EPAs) between the EU and ACP regions, it is also proposed to back regional initiatives in support of commodity development such as regional networks of farmers organizations, quality-enhancing services, investment promotion or commodity branch organizations. A total of €600 million has already been allocated for trade-related assistance within the EPA negotiations.

**Managing risks and increasing access to finance:** support for new financial instruments and commodity risk insurance schemes, to fight against inadequate access to finance and cushion against price fluctuations. Support for the development of insurance tools at macroeconomic level to counter fluctuations in commodity prices that reduce predictability of government revenues and limit developing countries' ability to implement the reforms in favor of sustainable development and poverty alleviation. Finally the EU instrument to compensate for losses of export earnings (FLEX) will be simplified to ensure it reaches those most in need (see below).

**Support for diversification:** the EU should assist commodity-dependent developing countries

---

<sup>86</sup> [http://europa.eu.int/comm/trade/issues/global/development/pr120204\\_en.htm](http://europa.eu.int/comm/trade/issues/global/development/pr120204_en.htm)

(CDDCs) to make informed choices on promoting diversification and support the implementation of these choices. Provision of direct aid to local producer diversification is also proposed.

**Successful integration of CDDCs in the international trading system:** the Commission stands ready to pursue this goal in the on-going WTO talks under the Doha Development Agenda, as well as through the 2006 revision of the EU's system of trade preferences in favor of developing countries (GSP) and in the on-going review of the EU's rules of origin. The recent launch of a Helpdesk for exporters from developing countries is a further contribution to this end.

**Enhancing sustainable corporate practices and investments in CDDCs:** it is proposed to engage international commodity companies in the promotion of corporate social responsibility, sustainable codes of conduct, promotion of public private partnerships and promotion of international competition.

Building on the above general vision, the Commission also proposes a specific strategy<sup>87</sup> for an EU-Africa partnership in support of the cotton sector based on two complementary axes of intervention:

- Obtaining fairer trade conditions on international cotton markets: the EU supports the calls from the four African cotton producers (Benin, Burkina Faso, Mali and Chad) to pursue a reduction in trade-distorting subsidies within the WTO. In particular, within the agricultural negotiations in the Doha Development Agenda the EU calls for:
  - (i) Better market access for Least Developed Countries exports of cotton and textiles: developed countries should give duty free and quota free access for cotton and textiles from the world Least Developed countries, in line with the EU's Everything But Arms (EBA). It is also proposed to address the erosion of trade preferences and tariff escalation.
  - (ii) Elimination of all forms of export subsidies in this sector;
  - (iii) Reduction in trade-distorting domestic subsidies: the EU is currently discussing a comprehensive reform of the EU support for its cotton producers by partly de-coupling support from production, thus abandoning the most trade-distorting support.
- Trade-related technical assistance: helping developing countries to defend their interests. The EU has already allocated more than €80 million in supporting African countries to identify, present and defend their cotton related interests
- Supporting African cotton producing countries in consolidating the competitiveness of their cotton sectors, including implementation of comprehensive development plans for the cotton producing regions; strengthening of cotton related institutions and policies; facilitation of the integration within the cotton chain; improvement of responsiveness to evolutions of markets and technologies; and promotion of quality recognition.

The potential of Economic Partnership Agreements for the cotton sector is stressed and the Action Plan also includes measures to mitigate the impact of price fluctuations including access

---

<sup>87</sup> [http://europa.eu.int/eur-lex/en/com/cnc/2004/com2004\\_0087en01.pdf](http://europa.eu.int/eur-lex/en/com/cnc/2004/com2004_0087en01.pdf)

to mechanisms to manage revenue risks and compensation for sudden losses of export earnings through the EU's FLEX instrument.

As a first concrete step to co-ordinate activities, during the first half of 2004 the Commission intends to call an international seminar on cotton including all stakeholders concerned, i.e., cotton producing African countries, EU Member States and international institutions such as the World Bank or the IMF.

As another concrete step, the Commission proposes to expand and simplify the use of the FLEX instrument to compensate for export earning losses. FLEX was introduced in 2000 in the framework of EU ACP co-operation to assist governments facing sudden losses of revenues. It provides additional budgetary support to ACP countries that have registered: (i) A 10% loss in export earnings (2% in the case of LDCs); and (ii) a 10% worsening of the programmed public deficit. Past experience shows that these eligibility criteria have been too stringent. From 2000-2002 in only 6 out of 51 cases have ACP countries been able to meet both criteria. Support from FLEX in the six cases has totaled €35.65 million. The proposal is to extend to landlocked countries and island states the special clause on a 2% loss in export earnings applied to LDCs, and to eliminate the 10% benchmark on the worsening in the programmed public deficit. Had the proposed criteria been applied to the 51 cases from 2000-2002, ACP countries would have received €255 million through the FLEX system, a 600% increase in the use of the instrument. Changes in FLEX will have to be adopted by the EU Council in view of a final decision by the EU-ACP Council of Ministers in May 2004. The proposed changes would then come into force in the first half of 2004, providing a timely and effective response to vulnerability of price fluctuations for the cotton producing countries and other CDDCs.

## **8. The Situation and Outlook for C-T-A Products under AGOA**

The African Growth and Opportunity Act (AGOA) was first signed on May of 2000, then renewed with certain enhancements as AGOA II in August of 2002. AGOA provided preferential access into the United States market for certain types of products that originate in eligible Sub-Saharan Africa (SSA) countries. The criteria for eligibility stated that beneficiary countries had to "have established, or are making continual progress toward establishing the following: market-based economies; the rule of law and political pluralism; elimination of barriers to U.S. trade and investment; protection of intellectual property; efforts to combat corruption; policies to reduce poverty, increasing availability of health care and educational opportunities; protection of human rights and worker rights; and elimination of certain child labor practices."

Of the 48 SSA countries, 37 were re-affirmed by President Bush as AGOA beneficiaries in December 2005 (Côte d'Ivoire was removed from the 2004 list). Final eligibility depends on obtaining a special "AGOA visa," which 19 countries have done as of this writing. Since Comoros, Sudan and Somalia are not eligible for GSP, they are also excluded from AGOA. Six other countries have not yet qualified for AGOA: Angola, Burundi, Equatorial Guinea, Liberia, Togo, and Zimbabwe. Several of the 10 ineligible countries (Togo, Sudan, and Zimbabwe) are significant cotton producers.

The stated purpose of AGOA was to: "encourage increased trade and investment between the United States and sub-Saharan Africa", mainly through duty-free treatment extended until 2008 for a large number of items not previously covered under the Generalized System of Preferences

**US IMPORTS  
FROM SSA UNDER  
AGOA & GSP**

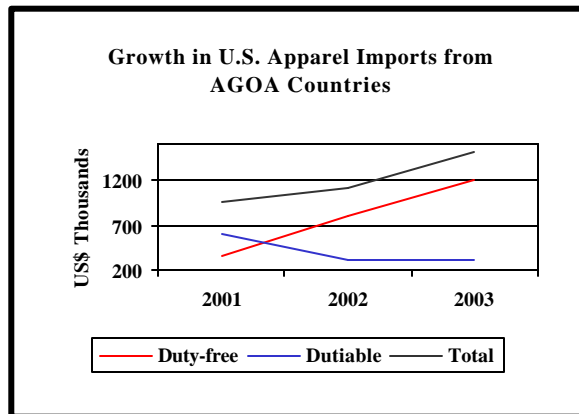
	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<b>Agricultural products</b>	153,515	212,436	240,931	265,101
<b>Forest products</b>	21,728	29,792	33,370	33,889
<b>Chemicals and related products</b>	128,083	136,164	176,786	221,839
<b>Energy-related products</b>	6,827,424	6,824,776	11,223, 684	23,053,406
<b>Textiles and apparel</b>	359,469	803,333	1,202,077	1,620,735
<b>Footwear</b>	242	300	800	935
<b>Minerals and metals</b>	319,134	372,961	412,519	728,092
<b>Machinery</b>	22,988	17,828	11,140	17,300
<b>Transportation equipment</b>	300,539	544,711	731,636	539,245
<b>Electronic products</b>	13,174	8,832	12,934	15,742
<b>Miscellaneous manufactures</b>	33,049	40,595	59,188	62,639
<b>Total (US\$ 000s)</b>	8,179,346	8,991,729	17,868,499	26,558,922
<b>Source: OTEXA at DOC</b>				

Under AGOA I, beneficiary countries were granted duty-free access for more than 1,800 tariff line products, in addition to the GSP list of about 4,600 products already available to other GSP beneficiaries outside of Africa. About 600 apparel products received duty-free treatment for the first time under AGOA. Handicrafts and folkloric articles were covered, but not fabric and yarn.

U.S. import value for the main categories over the last three years is shown above. Energy-related products continue to dominate, with an 87% share in 2003, up significantly from the prior year in both absolute and relative terms. Although textiles and apparel showed good (35%) growth in value in 2004, culminating in \$1.62 billion worth of exports, they still accounted for just 6.1% of the total., down from 6.7% the previous year. Agricultural products (which include infinitesimal amounts of cotton lint and by-products) achieved a share of just under 1% in 2004, down from 1.35% in 2003. The main issues for agricultural products under AGOA are market access due to unresolved phytosanitary issues and lack of competitiveness in terms of seasonality, landed cost and quality.

To enter the United States free of duty, garments from AGOA countries also require a special “wearing apparel” visa. This requires compliance with highly restrictive and complicated regulations as to the origin of fabric, yarn, findings, trimming, collars, cuffs, and other minor components.

Significant increases in total apparel exports from AGOA eligible countries to the United States were anticipated and did in fact happen: \$954.1 million in 2001; \$1.106 billion in 2002, \$1.505 billion in 2003, and \$1.750 billion in 2004. On the other hand, as more AGOA countries received and made use of apparel visas, a much faster 337% growth in duty-free apparel exports was achieved: \$355 million in 2001; \$803 million in 2002, \$1.202 billion in 2003, and \$1.621 billion in 2004.<sup>88</sup> That implies a rising and now quite high utilization rate.



Sub-Saharan Africa supplied 1.93% of total U.S. textile and apparel imports in the first three quarters of 2003, as compared with 1.55% in 2002, 1.39% in 2001, 1.1% in 2000, and 0.95% in 1999. Thus Africa's market share in the United States has doubled (in both volume and value terms) since AGOA was passed.<sup>89</sup>

There was an initial overall cap set at 1.5% (in square meter equivalents) of all U.S. apparel imports, with an annual increase to 3.5% until 2008, but AGOA II doubled the ceiling to 7%. Thus far the quota fill rate has been far below the ceiling, and for FY2004 it reached just under 38%,<sup>90</sup> so the cap has not been a concern.

**In 2004, 15 of the 19 countries with an AGOA apparel visa actually shipped eligible apparel products.** Top performers for 2004 by AGOA-eligible value included: Lesotho (\$446.487M); Mauritius (\$147.798 M); South Africa (\$114.827 M); Madagascar (\$314.178 M); Kenya (\$271.483 M); and Swaziland (\$175.6392 M). Among the Lesser Developed Countries, Lesotho remains the value leader by far, but Madagascar is showing the fastest growth rate. Detailed tables for AGOA apparel exports (both volume and value) by country can be found in Appendices 3 and 4.

**OTEXA statistics also show that most eligible countries are now managing to export significant quantities of apparel to the U.S. under AGOA.** South Africa and until recently Mauritius have much lower utilization rates, which means that a smaller percentage of their apparel exports meet AGOA's duty-free requirements. The countries that can still use third country textile inputs for their AGOA-eligible exports tend to have much higher utilization ratios

**The largest increases in AGOA apparel imports have occurred in two broad product categories: (1) knit shirts and blouses; and (2) trousers, slacks and shorts.** Since the main fiber available in SSA countries is cotton, it is not surprising that cotton-rich products figure prominently. The category entitled "cotton trousers, slacks and shirts" showed the largest increase while "cotton knit shirts and blouses" came next. On the other hand, cotton-rich products tend to cost more than blends with higher synthetic content, so cotton-rich products are less competitive in the lower-end markets.

<sup>88</sup> [http://reportweb.usitc.gov/africa/by\\_country\\_agoa.jsp](http://reportweb.usitc.gov/africa/by_country_agoa.jsp)

<sup>89</sup> African Coalition for Trade, U.S.-Africa Trade report, November 30, 2003.

<sup>90</sup> [http://www.otexa.ita.doc.gov/agoa-cbtpa/agoa-cbtpa\\_2004.htm](http://www.otexa.ita.doc.gov/agoa-cbtpa/agoa-cbtpa_2004.htm)

**Figure Two: Total Imports into the U.S. of Textiles and Apparel from AGOA-beneficiary Countries (Wearing Apparel qualified)**  
**Source: US Department of Commerce, Office of Textiles and Apparel (OTEXA), March 2004.**

**Data in US \$ Millions**

				VTD	VTD	12 months ending	12 months ending	12 months ending
	2001	2002	2003	01/2003	01/2004	01/2004	12/2003	11/2003
<b>AGOA Total</b>								
<b>Total Imports of Apparel</b>	<b>954.107</b>	<b>1108.455</b>	<b>1504.657</b>	<b>120.012</b>	<b>134.428</b>	<b>1519.072</b>	<b>1504.657</b>	<b>1467.198</b>
9802.00.8065 Articles assembled from any fabric cut in the United States(807)	0.75	2.117	0.38	0	0.082	0.462	0.38	0.38
(AGOA) Imports under the Trade and Development Act of 2000 (Total of items below)	355.332	798.152	1197.081	89.175	116.094	1224	1197.081	1153.175
9819.11.03 Apparel assembled from U.S. cut fabric & yarn,further processed	0	0.808	4.173	0.185	0.578	4.566	4.173	4.378
9819.11.06 Apparel cut and assembled from U.S. fabric, yarn & thread(809)	1.996	0.705	3.046	0.077	0.466	3.436	3.046	2.914
9819.11.09 Apparel from regional fabric from U.S. or African yarn	62.645	176.316	226.337	27.047	18.886	218.176	226.337	223.631
9819.11.12 Apparel from foreign fabric made in a lesser developed country	264.433	596.049	914.309	61.088	92.034	945.255	914.309	876.098
9819.11.15 Cashmere sweaters, knit-to-shape	19.072	7.03	16.537	0.019	0.183	16.701	16.537	15.44
9819.11.18 Merino wool sweaters, knit-to-shape	0.06	0.029	0.004	0	0	0.004	0.004	0.004
9819.11.21 Apparel from fabric or yarn in short supply (401/NAFTA)	3.637	10.045	11.923	0.184	1.738	13.477	11.923	11.092
9819.11.24 Apparel from fabric or yarn N/A in commercial qty (CITA)	3.351	7.171	20.73	0.575	2.209	22.364	20.73	19.597
9819.11.27 Handloomed, handmade and folklore articles	0	0	0.02	0	0	0.02	0.02	0.02
9819.11.30 Apparel from U.S. fabric, yarn & thread (mixed cutting)	0	0	0.001	0	0	0.001	0.001	0.001

**Figure Three: Total Imports into the U.S. of Textiles and Apparel from AGOA-beneficiary Countries (Wearing Apparel qualified)**  
**Source: US Department of Commerce, Office of Textiles and Apparel (OTEXA), March 2004**

**Data in Square Meter Equivalents**

				YTD	YTD	12 months ending	12 months ending	12 months ending
	2001	2002	2003	01/2003	01/2004	01/2004	12/2003	11/2003
<b>AGOA Total</b>								
<b>Total Imports of Apparel:</b>	<b>226.547</b>	<b>301.14</b>	<b>397.134</b>	<b>32.22</b>	<b>36.781</b>	<b>401.696</b>	<b>397.134</b>	<b>388.66</b>
9802.00.8065 Articles assembled from any fabric cut in the United States(807)	0.346	0.588	0.056	0	0.033	0.09	0.056	0.056
(AGOA) Imports under the Trade and Development Act of 2000 (Total of items below)	74.72	199.186	310.75	24.401	32.128	318.477	310.75	301.154
9819.11.03 Apparel assembled from U.S. cut fabric & yarn,further processed	0	0.644	6.093	0.278	0.728	6.543	6.093	6.398
9819.11.06 Apparel cut and assembled from U.S. fabric, yarn & thread(809)	0.179	0.054	0.896	0.079	0.058	0.875	0.896	0.876
9819.11.09 Apparel from regional fabric from U.S. or African yarn	10.293	32.906	43.046	5.877	4.185	41.354	43.046	42.755
9819.11.12 Apparel from foreign fabric made in a lesser developed country	62.558	162.672	254.983	18.044	26.531	263.47	254.983	245.723
9819.11.15 Cashmere sweaters, knit-to-shape	0.368	0.164	0.571	0.001	0.005	0.576	0.571	0.544
9819.11.18 Merino wool sweaters, knit-to-shape	0.002	0.002	0	0	0	0	0	0
9819.11.21 Apparel from fabric or yarn in short supply (401/NAFTA)	0.546	1.707	1.939	0.03	0.257	2.165	1.939	1.816
9819.11.24 Apparel from fabric or yarn N/A in commercial qty (CITA)	0.748	1.037	3.22	0.092	0.364	3.492	3.22	3.042
9819.11.27 Handloomed, handmade and folklore articles	0	0	0.001	0	0	0.001	0.001	0.001
9819.11.30 Apparel from U.S. fabric, yarn & thread (mixed cutting)		0	0	0	0	0	0	0

**A key provision of AGOA is that eligible countries that meet the 'Wearing Apparel' requirements and that also classify as 'Lesser Developed Countries' (LDDCs) can use non-qualifying (i.e. extra-regional and non-U.S.) third country input materials for eligible apparel exports.** As Figures 2 and 3 reveal below, the highest percentage of duty-free imports has come from HS 9819.11.12, which is “Apparel from foreign fabric made in a lesser developed country.”

Under AGOA II, this provision was set to expire on 30 September 2004, after which all AGOA suppliers that wished to export apparel duty-free to the U.S. would have had to use either (qualifying) local and regional fabrics and yarns, or U.S. fabrics and yarns. That would have put the AGOA LDDC countries on a level playing field with the four AGOA countries that did not enjoy LDDC status at that time (South Africa, Mauritius, Gabon and the Seychelles). Unless the end-date was extended through new legislation, one of the main incentives that caused diversion of textile and apparel investment into the AGOA LDC countries, and one of the main competitive advantages granted under AGOA, would have disappeared.

Initially U.S. stakeholders (especially the U.S. Congress) hoped that September 30, 2004 end-date for the Rule of Origin (ROO) exemption for LDDCs would be far enough into the future to

stimulate investments in intermediate processing and manufacturing within the AGOA countries. For various reasons that has not proven to be the case. The U.S. delay in getting AGOA regulations and procedures in place was longer than expected. The time required for many prospective beneficiaries to obtain AGOA and apparel visas was also long. The absence of an export-capable apparel industry in many of the landlocked and/or West African countries meant either a high barrier to entry or delayed utilization of AGOA preferences. The normal planning and execution horizon for major investments in textiles was not taken into account. The shortness of a guaranteed payback horizon lowered expected returns. Uncertainty as to possible extension of this crucial date increased risk. And the less-than-ideal enabling environment in many AGOA countries scared off some investors.

Moreover, all of the SSA countries as a group would then have had to compete head-on with countries (in Asia especially) that do pay duty in the U.S. market but have no Rule of Origin requirement, and can therefore source raw materials wherever they like. In the short run at least, the benefit to AGOA countries of duty-free status in the U.S. market would be offset by the need to source more expensive U.S. raw materials to make up for the anticipated shortfall in regional raw materials.

**In the end, however, the AGOA Acceleration Act of 2004 (AGOA III) was indeed passed by the House in January of 2004, then signed by President Bush in July of 2004.** That extended AGOA benefits through 2015. Preferential treatment for “lesser developed beneficiary Sub-Saharan countries” plus Botswana and Namibia, was extended though September 30, 2007, for apparel articles wholly assembled, or knit-to-shape and wholly assembled, or both, in one or more lesser developed beneficiary sub-Saharan African countries. Additional favorable changes were made in the rules of origin on apparel, “cumulation”, handicraft, and de minimis provisions.

## **9.0 Analysis of C-T-A Trade Performance for AGOA Countries**

### **9.1 Exports of Cotton Textiles and Apparel to the United States**

To provide some perspective on the relative importance of the C-T-A complex, the composition of agricultural, textile and apparel merchandise exports from AGOA countries is summarized on the next two pages based on two-digit HS categories. The selected total amounts to \$61 billion for 2002. As readers will note, “knitted or crocheted apparel” (HS 61) exports were worth \$1.178 billion, placing fourth on this list after wood, fish, and cocoa. “Apparel not knitted” (HS 62) ranked seventh at \$867 million, while “cotton...” (HS 52) ranked eleventh at \$544 million.

The ITC figures also estimate that knitted apparel accounted for 1.9% of AGOA country merchandise exports in 2002, while woven and other apparel accounted for 1.41%, and cotton 0.89% of the total. Taken together, the core categories that comprise the C-T-A complex in AGOA countries generated about \$2.585 billions in exports in 2002, equivalent to a 4.23% share. Their importance is therefore self-evident.



**Figure Four**  
**Selected List of Product Groups**  
**Exported by African Growth and Opportunity Act (AGOA) Countries in 2002**

HS rev. 1	Product	Value 2002 in US\$ thousand	Annual growth in value between 2001 - 2002, %	Annual growth of world exports between 1998 - 2002, %	Ranking in region exports	Share in world exports, %
	All products	61,074,967	-12	4		1.0
<a href="#">01</a>	Live animals	34,757	-6	1	70	0.0
<a href="#">02</a>	Meat and edible meat offal	166,256	-9	3	44	0.0
<a href="#">03</a>	Fish, crustaceans, molluscs, aquatic invertebrates nes	1,477,460	-9	3	9	3.0
<a href="#">04</a>	Dairy products, eggs, honey, edible animal product nes	65,884	45	0	62	0.0
<a href="#">05</a>	Products of animal origin, nes	23,422	21	0	77	1.0
<a href="#">06</a>	Live trees, plants, bulbs, roots, cut flowers etc	210,200		2	37	2.0
<a href="#">07</a>	Edible vegetables and certain roots and tubers	218,686	12	3	34	1.0
<a href="#">08</a>	Edible fruit, nuts, peel of citrus fruit, melons	1,038,886	15	0	12	3.0
<a href="#">09</a>	Coffee, tea, mate and spices	925,533	-10	-13	14	8.0
<a href="#">10</a>	Cereals	212,698	20	-2	36	1.0
<a href="#">11</a>	Milling products, malt, starches, inulin, wheat gluten	91,017	40	1	57	2.0
<a href="#">12</a>	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	194,277	9	2	39	1.0
<a href="#">13</a>	Lac, gums, resins, vegetable saps and extracts nes	39,698	-18	2	68	2.0
<a href="#">14</a>	Vegetable plaiting materials, vegetable products nes	52,166	-17	-2	65	13.0
<a href="#">15</a>	Animal,vegetable fats and oils, cleavage products, etc	143,767	-7	-5	46	1.0
<a href="#">16</a>	Meat, fish and seafood food preparations nes	215,651	-1	3	35	1.0
<a href="#">17</a>	Sugars and sugar confectionery	776,193	-10	0	17	5.0
<a href="#">18</a>	Cocoa and cocoa preparations	1,162,621	33	1	11	8.0
<a href="#">19</a>	Cereal, flour, starch, milk preparations and products	46,339	47	4	66	0.0
<a href="#">20</a>	Vegetable, fruit, nut, etc food preparations	316,371	18	1	30	1.0
<a href="#">21</a>	Miscellaneous edible preparations	79,065	-59	3	60	0.0
<a href="#">22</a>	Beverages, spirits and vinegar	502,264	17	3	23	1.0
<a href="#">23</a>	Residues, wastes of food industry, animal fodder	122,533	22	3	49	1.0
<a href="#">24</a>	Tobacco and manufactured tobacco substitutes	562,680	-5	-4	20	3.0
<a href="#">31</a>	Fertilizers	200,953	22	1	38	2.0
<a href="#">32</a>	Tanning, dyeing extracts, tannins, derivs,pigments etc	120,218	9	2	50	0.0

<a href="#">33</a>	Essential oils, perfumes, cosmetics, toiletries	637,912	152	6	19	2.0
<a href="#">34</a>	Soaps, lubricants, waxes, candles, modelling pastes	99,822	0	4	53	0.0
<a href="#">40</a>	Rubber and articles thereof	293,773	17	1	32	0.0
<a href="#">41</a>	Raw hides and skins (other than furskins) and leather	477,209	-6	6	24	2.0
<a href="#">42</a>	Articles of leather, animal gut, harness, travel goods	22,648	0	4	80	0.0
<a href="#">43</a>	Furskins and artificial fur, manufactures thereof	5,945	13	5	94	0.0
<a href="#">44</a>	Wood and articles of wood, wood charcoal	1,870,394	-1	1	7	3.0
<a href="#">45</a>	Cork and articles of cork	1,937	31	2	96	0.0
<a href="#">46</a>	Manufactures of plaiting material, basketwork, etc.	12,026	-13	8	88	1.0
<a href="#">47</a>	Pulp of wood, fibrous cellulosic material, waste etc	335,646	-9	3	29	2.0
<a href="#">48</a>	Paper & paperboard, articles of pulp, paper and board	457,663	-13	2	25	0.0
<a href="#">50</a>	Silk	523	19	-2	98	0.0
<a href="#">51</a>	Wool, animal hair, horsehair yarn and fabric thereof	175,629	11	-1	42	2.0
<a href="#">52</a>	Cotton	544,087	-13	1	21	1.0
<a href="#">53</a>	Vegetable textile fibres nes, paper yarn, woven fabric	19,998	0	0	82	1.0
<a href="#">54</a>	Manmade filaments	96,576	12	-3	55	0.0
<a href="#">55</a>	Manmade staple fibres	65,346	-5	-4	64	0.0
<a href="#">56</a>	Wadding, felt, nonwovens, yarns, twine, cordage, etc	27,783	19	0	76	0.0
<a href="#">57</a>	Carpets and other textile floor coverings	23,387	4	-2	78	0.0
<a href="#">58</a>	Special woven or tufted fabric, lace, tapestry etc	19,521	8	3	83	0.0
<a href="#">59</a>	Impregnated, coated or laminated textile fabric	19,029	16	1	84	0.0
<a href="#">60</a>	Knitted or crocheted fabric	16,928	-50	2	85	0.0
<a href="#">61</a>	Articles of apparel, accessories, knit or crochet	1,177,945	8	3	10	1.0
<a href="#">62</a>	Articles of apparel, accessories, not knit or crochet	862,984	4	1	15	1.0
<a href="#">63</a>	Other made textile articles, sets, worn clothing etc	65,445	15	5	63	0.0
<a href="#">64</a>	Footwear, gaiters and the like, parts thereof	31,888	22	2	72	0.0
<a href="#">65</a>	Headgear and parts thereof	6,350	-18	4	92	0.0

Source: ITC calculations based on COMTRADE statistics

## 9.2 Trade Balance in Cotton-based Products

Figure Five below summarizes the AGOA country export and import values recorded for the main HS categories for the latest year available.

**Figure Five**  
**2002 Trade Balance for AGOA Countries in the Principal Cotton Categories**

HS Code	Product Category	Exports	Imports	Balance
US\$000s				
5201	cotton, neither carded nor combed	383,543	79,328	304,215
5202	cotton waste, incl. yarn waste and garnetted stock	3,862	1,751	2,111
5203	cotton, carded or combed	21,617	3,879	17,738
5204	cotton sewing thread, whether or not put up for retail sale	1,098	4,819	-3,721
5205	cotton yarn other than sewing thread, containing $\geq$ 85 % cotton by weight (excl. that put up for retail sale)	47,263	141,933	-94,670
5206	cotton yarn other than sewing thread, containing $>50$ % to $< 85$ % cotton by weight (excl. that put up for retail sale)	2,267	9,084	-6,817
5207	cotton yarn other than sewing thread put up for retail sale	1,823	8,397	-6,574
5208	woven fabrics of cotton, containing $\geq$ 85 % cotton by weight and weighing $\leq$ 200 g per m <sup>2</sup>	22,162	454,801	-432,639
5209	woven fabrics of cotton, containing $\geq$ 85 % cotton by weight and weighing $> 200$ g per m <sup>2</sup>	44,455	133,526	-89,071
5210	woven fabrics of cotton, containing 50 % to 85 % cotton by weight, mixed principally or solely with man-made fibres and weighing $\leq$ 200 g per m <sup>2</sup>	2,222	54,689	-52,467
5211	woven fabrics of cotton, containing $> 50$ % to $< 85$ % cotton by weight, mixed principally or solely with man-made fibres and weighing $> 200$ g per m <sup>2</sup>	7,824	15,622	-7,798
5212	woven fabrics of cotton, containing $> 50$ % to $< 85$ % cotton by weight, other than those mixed principally or solely with man-made fibres	4,490	35,994	-31,504
Source: ITC, TradeMap based on COMTRADE data				

While some of the extremes in this table could be tempered by subtracting intra-AGOA trade flows, the export dependence of AGOA countries on primary cotton products, as well as their import dependence on externally provide yarn and fabric, remain very obvious. Nevertheless, from the viewpoint of public and industry policy, the challenge is how to reduce both kinds of dependency, particularly when the domestic market for cotton lint is limited, and when the export markets can only be accessed by using yarn or fabrics that originate in the target market.

## 9.3 Export Performance in C-T-A Products by Country

To examine the composition of relevant exports originating within the C-T-A complex for each SSA country, detailed merchandise export figures were obtained through the Trade Map of UN ITC, which derives from the COMTRADE database. The full data set (or analysis) is presented as Appendix Five. As ITC itself fully recognizes, the data is admittedly imperfect because most countries in Africa do not report directly to COMTRADE. Nevertheless, when gaps are filled from other sources, it still provides a useful country-by-country snapshot. Highlights include the following:

**Benin:** Total exports of goods were reportedly \$151.4 million in 2002. At \$73.2 million, the rubric of “cotton, not carded or combed” represented almost half of the total. Cotton seed cake and cottonseeds each accounted for around \$5 million in exports. Although Benin exported more than \$3 million per year of woven cotton fabrics between 1998 and 2001, no data appear in ITC for 2002. Other sources indicate that there were no other textile or apparel exports of significance.

**Botswana:** Total merchandise exports were \$1.749 billion. Only small amounts of cotton exports were recorded. Only two C-T-A relevant categories were reported in Trade Map for 2002: cotton t-shirts at \$3 million, and at \$1.145 million, women's trousers or shorts made of cotton. However for the years 2000 and 2001, some \$6-\$8 million in woven mens/boyswear was reported in other ITC trade statistics, and as much as \$4 million in woven womenswear. Moreover, ITC statistics show \$3.7 million in knit/crocheted womenswear exports.

**Burkina Faso:** Total exports were \$109.35 million in 2002. At \$64.5 million, "cotton, not carded or combed" represented 59% of the total for 2002. Cotton yarn and cottonseeds each contributed another \$2 million in exports. There were no textile or apparel exports of significance. It should be noted that ITC figures showed \$104 million in cotton exports for 2001, and more for prior years, so unless a sudden drop occurred it is likely that some data was under-reported for 2002.

**Burundi:** Total merchandise exports were reported as \$12.437 million in 2002. The only directly relevant product category was again "cotton, not carded or combed," with \$270,000 in value.

**Cameroon:** Total exports were estimated at \$1.726 billion. "Cotton, not carded or combed," with \$50.8 million in exports, was the largest subcategory of relevance, within a total of \$93.9 million for all 2002 cotton exports. Although not revealed in Trade Map, in another database ITC reported \$2.235 million in exports of woven cotton fabrics plus \$300,000 in made-ups.

**Cape Verde:** Total export of goods was \$18.456 million. There were no exports of primary cotton products, mainly because Cape Verde does not produce any cotton.. About 30% of the total was generated from apparel exports, which amount to about \$4.5 million, spread across 16 product subcategories. The two subcategories of most importance were men's cotton briefs and shirts, which together accounted for about half of all apparel exports.

**Central African Republic:** Total merchandise exports in 2002 were valued at \$52.446 million. For our purposes, again "cotton, not carded or combed" was the only immediately relevant subcategory, showing \$7.1 million in exports. There were no textile or apparel exports of significance shown. However in the past CAR has been known to export some (<\$750,000) woven cotton fabric.

**Chad:** Total exports were estimated at \$52.287 million. At \$36.982 million, cotton lint represented more than 70% of all merchandise exports in 2002. No textile or apparel exports were reported by ITC.

**Ethiopia:** A total of \$414.9 million in export of goods as reported for 2002. According to Trade Map, carded or combed cotton accounted for about \$5.2 million worth, while woven cotton fabric generated another \$1.66 million. Other ITC trade statistics show \$6.677 million in exports of cotton products, \$2.469 million in woven cotton fabric, \$570,000 in made-up textile articles, and \$677,000 for "articles of apparel nes".

**Gambia:** Total merchandise exports of \$27.131 million included \$592,000 in polyester fiber and fabric, plus about \$100,000 in used clothing. No primary cotton products or apparel exports appeared.

**Gabon:** Shows more than \$3 million in exports of articles of apparel nes for 1999 and 2000 but no data for other years. .

**Guinea-Bissau:** \$59.227 million in exports subsumed \$2.669 million in uncombed/uncarded cotton plus \$266,000 in cottonseed. No textile or apparel exports were recorded.

**Guinea:** According to Trade Map, exports in 2002 totaled \$738 million, of which \$4.932 million came from “cotton, not carded or combed,” while another \$918,000 derived from cottonseeds. There were no reports of textile or apparel exports of significance.

**Ivory Coast:** Trade Map shows \$3.038 billions in 2002 merchandise exports for this country. However the only subcategory of relevance was uncombed cotton, for which \$63.565 million in exports were reported. However, other ITC data shows \$134 million in total cotton exports, so Trade Map may be under-reporting other categories, such as cotton lint, seed or cake. Again no textile or apparel exports were reported in Trade Map, yet other ITC datasets show \$25.7 million in woven cotton fabrics, \$3.5 million in textile yarns, \$18.5 million in made-up textile articles, and depending on the year, \$3-\$6 million in woven menswear as well as \$2-\$3 million in articles of apparel nes. These textile and apparel almost certainly are cotton-rich.

**Kenya:** Although ITC reported \$1.4 billion in total merchandise exports, Trade Map shows only \$6.9 million in C-T-A relevant exports for 2002, all for worn clothing. This is clearly incomplete. Other ITC trade statistics for 2002 show \$1.08 million in cotton exports, \$4.877 million in yarn exports, almost \$1 million in woven cotton fabrics, \$2.5 million in man-made wovens, \$2.1 million in special yarns or fabrics, \$7.85 million in made-ups, \$457,000 in woven menswear, \$289,000 in woven womenswear, \$1.15 million in apparel nes, and finally \$1.1 million in accessories. Yet OTEXA data for 2003 reports \$187 million in apparel imports under AGOA, of which \$157 million were cotton-rich. C-T-A relevant exports for Kenya in 2002 were certainly above \$100 million and probably closer to \$150 million.

**Lesotho:** Total exports of goods were reported by Trade Map at \$351 million. All of the subcategories of relevance for our purposes consisted of apparel rather than primary cotton products or textiles. Almost 63% of total exports derived from HS 61, knitted apparel. This category showed 18 different subcategories with more than \$500,000 in export value, 14 of which exceeded \$1 million, and 10 of which surpassed the \$5 million mark. By far the biggest was knitted cotton pullovers and cardigans, with \$97 million worth of exports. As far as not knitted (i.e. woven) garments are concerned, Lesotho registered a total of \$123.3 million in exports from within five subcategories. Trousers and shorts made of cotton were the largest woven apparel subcategories, registering \$68.65 million in men’s wear plus \$49.825 million in women’s wear. Total apparel exports of all types amounted to \$343,774, which equates to 98% of all of Lesotho’s export of goods. Trade Map also reported \$7.6 million in woven cotton fabric exports for 2001, but nothing for 2002. Primary cotton products do not appear in any of the data sets examined.

**Madagascar:** Merchandise exports for 2002 amounted to \$774.271 million. Significant export value was evident for ten six-digit subcategories, four of them under knitted apparel (HS61) and six under not knitted apparel (HS62). The amounts ranged from a low of \$4.435 million to a high of \$38.318 million (the latter for knitted cotton pullovers and cardigans). Woven cotton trousers and shorts for men showed \$30.792 million in export value, followed by knitted wool sweaters at \$24.257 million. Not knitted women’s cotton pants or shorts showed \$19.8 million, knitted cotton t-shirts almost \$14 million in exports, and shawl, veils and scarves more than \$10 million. Although there was no evidence of export of primary cotton products or textile fabric in Trade Map, ITC’s other trade data shows \$2.5 million in cotton exports in 1998-99, along with \$18.2 million in yarns, so either the data has not been received, or Madagascar has exited those

segments.

**Malawi:** The total for 2002 exports of goods was \$331.531 million. The only primary cotton products to appear were cottonseeds (\$1 million) and cotton lint (\$4.1 million). No textile fabric exports were shown in Trade Map. A total of \$24.1351 million in garment exports was reported, about evenly distributed over eleven 6-digit subcategories within the knitted and not knitted apparel rubrics. For most categories, the trend is negative.

**Mali:** Relevant exports in 2002 totaled \$118.752 million. Mali's largest export product by far was uncombed cotton, worth \$81.5 million. About \$1.5 million in cottonseed shipments appear also. There was no indication of any exports of fabric or garments.

**Mauritius:** Some \$1.75 billion in merchandise exports were reported for this country. C-T-A relevant products accounted for \$891.847 million, slightly more than half the total. Mauritius apparently exported about \$5.6 million in yarn, down 2/3 from 2001. Mauritius also shipped \$21 million worth of cotton-rich denim, plus another \$7 million in other cotton fabric. The rest of its relevant exports were distributed across a dozen HS 61 and HS 62 subcategories. Knitted cotton t-shirts were the biggest item at \$316 millions, followed by \$138 million worth of woven cotton trousers/shorts for men, and \$120 millions of the same for women. Woven cotton shorts amounted to \$96 million in export value. Wool sweaters topped \$50 million, while blended fiber sweaters amounted to \$40 million and cotton-rich sweaters \$38 million.

**Mozambique:** While this country exported about \$447 million worth of goods in 2002, only \$15 million was C-T-A relevant, all of it "cotton, not carded or combed." No textiles or apparel appeared that year, but for 2001 ITC did report \$3.3 million in exports of knitted/crocheted fabrics, \$6.6 million for woven menswear, \$2.2 million for knitted menswear, and another \$1 million for articles of apparel nes, so there must be data missing for 2002.

**Namibia:** Similarly, even though this country recorded \$733 million in 2002 exports, the only reported items relevant to this study consisted of \$4.2 million in knitted cotton sweaters. However, for 2001 ITC reported \$5.5 million in woven menswear, \$846,000 in knitted menswear, and \$400,000 for articles of apparel nes. Neither cotton itself, nor fabrics, registered any export volume.

**Niger:** Out of \$86 million in 2002 merchandise exports, only \$1 million in cotton lint exports is worth mentioning. Apparently there were no significant exports of textiles or apparel.

**Nigeria:** Although Nigeria's energy-related exports are huge, only \$14.4 million of its 2002 total of \$14.965 billion was related to the C-T-A complex. The country recorded \$8.5 million worth of uncombed cotton lint exports, plus almost \$6 million in staple polyester fiber exports.

**Rwanda:** Despite \$46 million in totalexports of goods, in 2002 Rwanda shipped only about \$1 million worth of relevant products, mostly synthetic woven fabric, plus some cotton thread and woven polyester fabric.

**Senegal:** Exported \$687 million in merchandise in 2002, of which \$10.579 million in carded or combed cotton was the only relevant item shown in Trade Map. However, ITC's import-export database shows a total of \$14.356 million, so there must be another category, possible cotton lint. The latter database also shows \$2 million in textile yarn exports for 2002.and \$1 million in woven cotton fabrics.

**South Africa:** This country shipped \$118,415 worth of Category 61 (knitted or crocheted) garment products, spanning seventeen 4-digit HS subcategories. At \$40.7 million, t-shirts were the most important item, followed by jersey and sweaters worth \$18 million women's blouses, and shirts valued at \$16.635 million. South Africa also exported \$128,682 worth of Category 61 (non knitted or crocheted) apparel, which spanned sixteen 4-digit HS subcategories. By far the biggest item was men's suits, jackets, trousers, shorts, with \$80.1 million in export value. Next came women's suits, jackets, dresses, skirts, shorts, at \$25.867 million. Tracksuits, brassieres, men's and women's shirts, babies garments, and accessories all represented at least \$1million in exports, in one case more than \$6 million. Although South Africa produces a lot of cotton, its industry consumes it, so no exports appear.

**Sudan:** At \$1.616 billion, Sudan is a major exporter of goods. A total of \$55.176 million of this clearly relates to the C-T-A complex because it consists of cotton, not carded or combed. There was no evidence of significant yarn, fabric or apparel exports.

**Swaziland:** Total exports of merchandise for 2002 amounted to \$974.312 million. None of this represented primary cotton products nor cotton yarn or fabric. However, Swaziland did export \$9.267 millions worth of polyester filament yarn. It also exported \$104.505 million worth of knitted or crocheted apparel, spread across seven six-digit subcategories, plus \$21.37 million worth of apparel, not knitted or crocheted. At \$30.696 million, the biggest item was non-cotton knitted t-shirts, followed by \$26.119 million of the same item, but based on cotton. Men's cotton shirts were also significant, at about \$23 million. No significant figures appear for cotton lint, yarn or fabric.

**Tanzania:** Merchandise exports were \$536.431 million. Of this amount, the most noteworthy item was uncarded and uncombed cotton, which amounted to \$18.582 million in export value. However, other ITC shows a total of more than \$30 million for all cotton between 1998 and 2002, so there are probably additional relevant cotton subcategories not captured by ITC in 2002. For 2001, \$3.2 million in yarn exports appear, along with \$737,000 on woven cotton fabric, \$473,000 in man-made wovens, \$2.452 million in knitted or crocheted fabrics, \$6.6 million in specialty yarns/fabrics, and \$450,000 in made-ups. Tanzania also registered \$2.4 million in exports of articles of apparel.

**Togo:** Exported \$250.605 millions worth of goods in 2002. Uncarded, uncombed cotton accounted for \$26.4 million in export value, while carded or combed cotton accounted for \$13.4 million, and cottonseeds another \$3 million. Trade Map reported no significant exports of yarn, fabric or garments, yet other ITC data shows \$2.656 million in exports of special yarns/fabrics for 2002, plus \$376,000 in made-ups.

**Uganda:** Reportedly shipped \$467.378 million worth of merchandise in 2002, of which \$5.371 million was carded or combed cotton, and \$3.619 million uncombed or uncarded cotton. Although ITC reported no textile or fabric exports for 2002 in Trade Map, its other trade stats show \$615,000 in yarn exports, plus \$753,000 in made-up textile articles.

**Zambia:** This country's overall merchandise exports amounted to \$923 million in value for 2002. Its main cotton-related export takes the form of "cotton, not carded or combed", for which \$16.404 million in value was reported by Trade Map for 2002. However, ITC also reported \$23.6 million in textile yarn exports, of which \$6.648 million was multi-stranded with more than 85% cotton, and \$5.703 million was single strand yarn with less than 85% cotton. While in 2000 Zambia reportedly exported \$6 million worth of made-up articles (SITC 658), this dropped suddenly to \$202,000 in 2001 and then rebounded only to \$880,000 in 2002. Apparel exports

appear as insignificant in value for 2001 or 2002. Yet this may be inaccurate, given that in 2001 Zambia apparently shipped \$2.2 million worth of woven menswear, \$7.5 million worth of woven ladies wear, almost \$2 million in knitted menswear, almost \$4 million in knitted ladies wear, about \$13 million in other articles of apparel, and \$2.5 million worth of clothing accessories. It would be unusual indeed for all such exports to disappear entirely.

**Zimbabwe:** Total merchandise exports for 2002 were \$2.211 billion. Cotton as defined by SITC Rev 3 was valued at \$117 million, nearly all of which was cotton, not carded or combed. Although not revealed via Trade Map, other ITC statistics show that Zimbabwe exported some \$30 million worth of textile yarn, almost \$30 million worth of woven cotton fabric, about \$1 million in man-made woven fabric, \$1.8 million in knit/crochet fabrics, nearly \$3 million in specialty yarns/fabrics, and almost \$10 million in made-ups. As far as apparel is concerned, ITC data indicates almost \$20 million in woven menswear exports, \$3 million in woven ladies wear, almost \$8 million in knitted menswear, and \$2.5 million in articles of apparel nes.

## **10. Structural and Policy Distortions in Sub-Saharan Cotton-Producing Countries**

To varying degrees throughout the African cotton economy, distortions caused by less than optimal competition and marketing policies, regulations, and state intervention reduce the efficiency of production, marketing and trade.

Depending on the country, distortions may include: direct involvement of the government in the productive chain; over-regulation of technology choices or input sourcing; controls over planting and agronomic decisions; involvement in price-setting for inputs, seed cotton, cotton seed, and/or lint; controls over ginning or marketing; or utilization of sectoral income to finance other governmental functions.

This all translates into foregone income to farmers. For example, according to Goreaux (2004)<sup>91</sup>, the share of the export price (Index A) received by growers in the Benin, Burkina Faso and Côte d'Ivoire averaged 41% in the four years after the CFA devaluation (i.e. 1994-98) and 59% in the next four years (1998-2002).

Limited efforts to privatize and/or liberalize the cotton sector began in the mid-Nineties in most SSA countries, but with mixed success. In a few cases, privatization and liberalization were undertaken in a very short period of time, and in an abrupt manner, but in most the process was done gradually, in recognition of the economic importance of the sector and the fact that many small farmers are involved. Sometimes the process was carried out by major function (i.e. input procurement and distribution, then ginning, then export marketing), while in other cases it was done by geographic zone.

The main challenges associated with privatization and liberalization have been: (1) how rapidly to effect change, and in what sequence; (2) whether and how to offer a fixed or guaranteed purchase price for seed cotton; (3) how to ensure orderly and timely delivery of seeds and agrochemicals, usually accompanied by either supplier or bank credit; (4) how to generate and transfer appropriate and improved technology; (5) how to encourage higher levels of quality and lower levels of contamination; (6) how to ensure orderly harvest, assembly and collection of seed cotton; (7) how to grade seed cotton and class cotton lint; (8) how to price cottonseed and other derivatives; (9) how to manage marketing for lint, cottonseed, and by-products; (10) how to settle

---

<sup>91</sup> Goreaux, L. "Cotton After Cancun", Discussion Paper for OECD, March 2004.



payments to producers and suppliers; and (11) how to handle production and price risks.

Both privatization and liberalization began much earlier in East and Southern Africa, starting in the late Eighties. In the case of Uganda, where until 1994 the Lint Marketing Board had a monopoly on lint exports as well as regulatory functions, the establishment of the Cotton Development Organisation (CDO) limited the role of government to research, supervision and promotion. After several years of post-liberalization decline, from 1998/99 onward the cotton sector has been regaining its vitality. Assisted by USAID projects, producer organizations appear to be gathering momentum. FDI in ginning is occurring. In Kenya, the Cotton Lint, Seed and Marketing Board, which used to oversee production and marketing, was abolished in 1994. The cotton sector has been in disarray ever since, with area planted reportedly down to 3,500 hectares, production down as well, gins standing idle, and dependence on imported yarn and fabric rising. In Tanzania, the government eliminated the monopoly previously held by the Cotton Marketing Board and the cooperative unions in 1994. For the first several years, while world prices remained high, farmers were better off. Yet area planted, yields and production have all been erratic for the past decade, largely because of the decline in fertilizer use. Only recently has the sector regained momentum, resulting in increased area planted, production, and export.

Turning to Southern Africa, the Cotton Marketing Board in Zimbabwe was shut down in 1995. Since then the government has not generally intervened in producer prices. The two main ginning and marketing companies compete on services rather than on price. Despite the political and social instability, cotton plantings and exports rose through the late Nineties, falling back as prices fell, then began to rebound as prices rose once again. Zambia's 1994 liberalization of the cotton sector was more drastic than most. The private sector was left to deal with issues of input distribution, credit recovery, ginning and even regulation. Zambia experienced considerable expansion after liberalization, peaking in area planted in the 1997/98 season, then leveling off at a somewhat lower level. However, global price declines through the end of 2001 dampened enthusiasm, so only now is the sector reviving. The Mozambique experience was quite different. First three joint venture companies were awarded concessions in 1999, resulting in an area expansion but credit defaults. Then in 1996 three private firms were given concessions, after which the area planted rose considerably, so that production had doubled to 100,000 MT as compared with 1995. In 1998 farmer associations with more than 20 hectares were given the right to choose their own gin. In 2000 the government experimented with open concessions, but by 2001 Mozambique had returned to closed concessions without free choice of where to gin<sup>92</sup>.

Prior to independence, the CFA countries marketed through the French parastatal Compagnie Française pour le Développement des Fibres Textiles (CFDT). After independence, generally within a few years local parastatals still partly owned by CFDT took over the input supply, ginning, transport and marketing functions. In a well-developed market system, where all the appropriate institutions exist—such as functioning credit markets, adequate contract enforcement, and good marketing information, the invisible hand of the market supplies critical functions. Yet in the FZA countries especially, the French *filière* model was then and continues to be attractive because it seems to fulfill the need to have a fully integrated supply chain in which critical goods and services such as agrochemicals, credit, and transport are delivered efficiently when needed and at reasonable cost.

As of this writing, the traditional single-company, vertically integrated monopsony model still

---

<sup>92</sup> Boughton, D., D. Tschirley, B. Zulu, A. Osorio, and H. Marule, "Cotton Sector Performance and Policies in Sub-Saharan Africa: Lessons Behind the Numbers in Mozambique and Zambia", 25<sup>th</sup> International Conference of Agricultural Economists, Durban, South Africa, August 2003.

prevails in Chad and Mali, in the first case still under the ownership and control of the government through the Central Bank, in the second under shared ownership between the government and DAGRIS (successor to CFDT, itself jointly owned by private interests and the government of France). Mali has taken a cautious approach to privatization and liberalization, concerned about the “disarray” into which Benin’s cotton economy seems to have fallen. In Benin, the monopoly of the national cotton company was ended in stages, starting with fertilizer supply, then export marketing, and more recently ginning. An “inter-professional association” was created to handle the “critical functions” mentioned earlier, but it does not seem to have provided the requisite leadership, nor to have been able to maintain order (e.g. avoidance of non-payment or “side-selling” of seed cotton, the latter consisting of delivery to another ginner despite prior receipt of inputs or credit from a first ginner.) In Côte d’Ivoire three geographic monopolies have been set up instead. Burkina Faso opted for partial liberalization and privatization, based on geographic zones, with an unusually good level of success.

In the West African countries (Benin, Togo, Ivory Coast, Burkina Faso) where there are multiple ginning companies, the allocation of seed cotton quantities does not necessarily reflect competition in sourcing. In Benin and Togo seed cotton allocations are based on installed ginning capacity, while in Côte d’Ivoire and Burkina Faso the allocation seems to be based more on the level of production in the gin’s designated geographic area. Under none of the CFA countries is open competition for seed cotton permitted between ginners, yet it does occur all the same. Just because a gin is more efficient does not mean that it will get more raw material to process. Even though the Franc Zone countries all subscribe to one or more regional integration bodies, and are moving toward a common regional market, cross-border trade in seed cotton is still not formally allowed, although it may occur in special situations such as the conflict in Ivory Coast. With respect to prices, different systems are used as well. All CFA countries announce prices, either before planting or before the marketing period begins. In Burkina Faso, which began later in the Nineties, a floor price is given out before planting, and if profit is made, there is a bonus the following season. Other countries also give post-season bonuses (*ristournes*).<sup>93</sup>

This is not the place to analyze in detail what happened in each country, and why. Over the past 25 years, the African cotton sector has been researched and written about quite thoroughly. The World Bank in particular has been active at various levels. Many thoughtful, well-crafted studies have been done. Most had the time and resources necessary to delve into this particular topic with greater depth than a synthesis report such as this can possibly do. Although country-specific analysis is virtually a necessity when considering the structure, conduct and performance of the cotton sector itself (and even more so when considering the entire cotton-textile-apparel complex), several overview studies have managed to compare and contrast the cotton economy across multiple countries. For the sake of brevity, we summarize the findings of just two studies of high quality, one concerning Sub-Saharan Africa as a whole, another West and Central Africa.

For Sub-Saharan Africa as a whole, Goreaux and Macrae (2003)<sup>94</sup> compared processes and stages of liberalization and privatization between two sets of three countries, and concluded that:

(quote)

---

<sup>93</sup> Badiane, O, D. Ghura, L. Goreaux, and P. Masson, “Cotton Sector Strategies in West and Central Africa”, World Bank, 2002

<sup>94</sup> Goreaux, L. and J. Macrae, “Reforming the Cotton Sector in Sub-Saharan Africa”, Africa Region Working Paper Series No. 47, World Bank, March 2003.

- 1) Reforms in the three Francophone countries under review are still in progress or at an early stage and the process followed by the three Anglophone countries in liberalizing their cotton sector does not provide a model that the former could readily copy.
- 2) Institutional reforms need to be adapted to the socio-political context of the country concerned.
- 3) The nature of the reforms and their sequencing have to be designed taking into account the initial conditions of the sector and the outcome may be affected by the quality of management, as much as by the merits of the theoretical models. For these reasons, the study does [not sic] conclude with the choice of a model.
- 4) An efficient credit system allowing small farmers to acquire quality inputs in a timely manner is a prerequisite for developing the cotton sector and reducing poverty; for this purpose, a direct link between the payment of seed cotton and the recovery of input credits has to be guaranteed.
- 5) Performances can be improved by giving more power to cotton growers in the management of the sector and encouraging a greater participation of the private sector.
- 6) Research and extension services cannot be left under the sole responsibility of the public sector.
- 7) Seed cotton marketing activities are best performed in a regulated framework agreed upon by the inter-profession.

(end-quote)

For West and Central Africa, which comprises most of the Franc Zone Countries, Badiane *et al.* (2002)<sup>95</sup> observed that the two principal distortions in the integrated input supply-ginning-lint marketing systems were: (a) the ability of the monopsonies to tax producers and accumulate profits in times of high export prices, and (b) the availability of budgetary support from national governments in times of low international prices. Thus, any decline in world market prices would have produced a sharp fall in growers' revenues without the assistance provided by the international donor community to national governments.

In order to remove these distortions the World Bank and the IMF has been pushing for these kinds of reforms:

- allowing free entry and competition at all levels of the cotton sector, including cross-border trade in seed cotton;
- developing private-sector-based mechanisms to ensure effective input credit recovery linked to the marketing of cotton;
- adopting pricing mechanisms that allow producer prices to reflect changes in world prices;
- developing effective market-based mechanisms to reduce price risks;
- building the technical and commercial capacities of producer associations to facilitate participation in voluntary contract farming arrangements, input supply, and technical services;

---

<sup>95</sup> Badiane, O., D. Ghura, L. Goreux, and P. Masson. "Cotton Sector Strategies in West and Central Africa," World Bank Policy Research Working Paper 2867, July 2002.

- establishing agribusiness trade associations to allow the private sector to participate effectively in the coordination and financing of sector-wide technical support services; and
- improving the provision of services, especially research, extension, and phytosanitary controls, where governments have an essential role in financing the public goods component.

In their view the prospects for achieving sustained poverty reduction in West and Central Africa would be greatly enhanced if these reforms were implemented, but that implementation would take several years to complete and that individual WCA countries are at different stages of progress toward establishing competitive sectors.

The literature does suggest that no single reform model has proven ideal in terms of the main indicators that USAID is likely to be concerned about, such as productivity at the farm and gin levels, product quality, global competitiveness, share of world prices, net return to farmers, distribution of risks (production, market, financial), and public-private roles.

## **11. Options<sup>96</sup> for Enhancing the Profitability, Competitiveness, Productivity and Sustainability of the Cotton Cluster in Africa**

### **Option 1: Support changes in US farm policy with respect to cotton**

Governmental and industry players in Sub-Saharan Africa (especially in West Africa) tend to argue first and foremost that what would help their cotton economy the most is a substantial shift in US (and EU) farm policy that would significantly reduce their aggregate measure of support for cotton. This idea, of course, falls well beyond the mandate of this report and USAID as a development agency. In any event, such change would require Congressional action, which is not likely to occur until a future Farm Bill is passed, if at all.

### **Option 2: Revise current USAID policy with respect to assistance for cotton**

Within USAID itself, a necessary but not sufficient pre-condition to addressing the needs of the African cotton sector is for the Agency to change its own policies and associated guidance to enable Missions to become seriously engaged in this sector. At the present time, USAID support for cotton production and exporting is constrained by the so-called “Bumpers Amendment.” Passed in May of 1986 by the US Congress, the Bumpers Amendment stipulates that “none of the funds to be appropriated to carry out Chapter 1 of the Foreign Assistance Act of 1981 may be available for any testing or breeding, feasibility study, variety improvement or introduction, consultancy, publication, or training in connection with the growth or production in a foreign country for export if such export would compete in world markets with a similar commodity grown or produced in the United States.”

On August 14, 1986, USAID General Counsel Howard Fry wrote: “...AID’s agricultural projects are governed by the language of Section 209, as interpreted by the Senate Appropriations Committee and Conference Reports. To the extent inconsistent with report language, Senator Bumpers’ post-conference statement has little value as a matter of law.”<sup>97</sup> His interpretation went on to say that “No appropriated funds can be used for agriculture development activities involving the growth or production of an agriculture commodity for export where it could compete with US exports of a similar commodity except:

<sup>96</sup> Note from author: The options presented are not mutually exclusive. In fact some are very complementary

<sup>97</sup> Information Memorandum for the Administrator, GC, Howard M. Fry, Analysis of the FY 1986 Urgent Supplemental Appropriations Act, Section 209 (the “Bumpers Amendment”), August 14, 1986.

- Where such activities are designed to increase food security and are not specifically designed to increase the host countries agriculture exports
- or Where such activities cannot be reasonably expected to have a significant impact on an export of a similar US commodity
- or Will not lead to direct competition with US exports”.

Unfortunately the existence of this interpretive memo is not widely known within the Agency.

The exact meaning of this amendment has never been tested through litigation. However, since U.S. agricultural interest groups occasionally threaten to block USAID activities in agricultural research based on the Bumpers Amendment as they interpret it, and such groups can be vociferous and influential, USAID Economic Growth and Program Officers who might be contemplating interventions in the cotton sector continue to view “Bumpers” as a major concern.

Even though the Bumpers Amendment covers only the production of certain primary commodities, and Senator Bumpers repeatedly emphasized that as the bill was being discussed, USAID mission personnel sometimes mistakenly construe it as applicable to transformed products (i.e. cotton-rich textiles or apparel) as well. **Actually two internal policy declarations are more germane than Bumpers to the textile and apparel sectors: Policy Determination 15 (September 13, 1986) regarding “Assistance to Support Agricultural Export Development;” and Policy Determination 20 (January 3, 1994, revised July 3, 1995) regarding “U.S. Programs and U.S. Jobs.”** The latter was superceded within USAID on April 21, 2003 by **Functional Series 200 – Programming Policy--ADS 225 – Program Principles for Trade and Investment Activities and the “Impact on U.S. Jobs” and “Workers' Rights.”**

Notwithstanding recent efforts to clarify whether, when and how USAID Missions can support cotton and downstream industries, uncertainty surrounding the meaning and application of the Bumpers Amendment continues to hamper Mission-level support for the entire cotton-textile-complex. Recent direct collaboration by the National Cotton Council in the West African Cotton Assessment and other USG supported activities related to the African cotton economy suggests that the caution may be excessive. The hesitation certainly has negative consequences in terms of implementation of AGOA, and also prevents the Agency from meaningful engagement in a segment of agriculture that is important to many USAID-assisted countries in the SSA region, and arguably critical to the C-4 countries.

At the request of USAID/AFR/SD, the author of the present report participated in late 2003 and early 2004 in a legislative and trade data review of the Bumpers Amendment, with particular emphasis on cotton. The results—which revealed very little convergence between USAID-assisted cotton producing countries and US cotton exports--were submitted in draft form in March of 2004. In October of 2004, in conjunction with the West African Cotton Assessment, the analysis was checked informally by a senior official of the National Cotton Council, who agreed that there really was not much sense of competition. (The NCC was much more concerned about competition between synthetics and cotton). Implementing some of the recommendations implicit in the report on “Bumpers” will depend on a change in the existence, content or interpretation of the Bumpers Amendment and related policy directives.

### **Option 3: Intensify and expand USG development assistance to the cotton sector**

Many studies have shown that the African cotton economy could be improved in terms of technology generation and transfer, good agricultural practices, economic efficiency, transparency, input procurement/distribution/cost, farm and ginning yields, product quality, management of risks, average prices received, and net returns to farmers. Various types of development interventions--singly or in combination--can be envisioned to address such challenges. The main ones are summarized below.

#### **Sub-option 3a: Provide support for better governance and further privatization, liberalization, and structural reform of the cotton sector in selected countries**

Many knowledgeable observers consider governance, which subsumes structure and conduct, as the overriding issue in some of the most important cotton producing countries of Sub-Saharan Africa.

A lack of transparency and accountability certainly afflicts at least three of the C-4 countries, as well as certain others across the Continent. Major stakeholders of all types in Benin admit to serious problems with “lack of respect for the rules of the game” as re-defined during its on-going privatization and liberalization process. The Malian parastatal has often been criticized for opaque decision-making and financial management. Chad’s cotton industry is seen as excessively controlled by the Central Bank and without effective research or extension services. And so on...

Some observers believe that a proper response to the many challenges facing the sector in the new global trading environment that emerged over the past decade requires complete liberalization of input and output markets, redefinition and contraction of the role of the State, and strengthening of market-oriented private organizations of input providers, producers, ginners and exporters.

Historically most of the cotton production and marketing systems in Africa systems were some combination of state and private monopolies. It is widely recognized that the state-owned or privatized monopolies or oligopolies generally have been inefficient. Yet, at the same time, they have delivered important services such as input supply, production credit, research, extension, and marketing. Any future reforms should ensure that such services are all provided. In cases of reform failure, typically one or more of these systems broke down. The following aspects of the cotton commodity system are especially critical:

- Enabling environment for agriculture, business and trade
- Technology generation and transfer
- Import and distribution of fertilizers and pesticides
- Seed production and multiplication
- Input distribution and associated credit
- Cotton ginning
- Marketing of cotton lint, cottonseed oil, by-products
- Price discovery throughout the system
- Management of production, marketing and financial risks

Despite the inefficiencies of monopsony/monopoly systems already alluded to, the one big advantage they had was that all of these dimensions were handled by a single entity. They did

constitute an integrated system encompassing all aspects of input and output marketing. In a well-developed market system that is characterized by all of the appropriate market support institutions such as functioning credit markets, adequate contract enforcement, and so on, the necessary economic functions can be covered by the “invisible hand” of the market. Yet transition from monopoly provision to market provision can be highly problematic, especially without adequate underlying support institutions, as evidenced by the mixed results of reform programs to date.

Arguably the most serious challenge for the African cotton economy—particularly in those countries where liberalization and privatization have not yet run their course—is how to ensure an adequate and timely supply of all required inputs when smallholder producers do not have the money to buy them, and when there is ample history of non-repayment for in-kind production credit. The evidence suggests that without access to seeds and fertilizer, both area planted and volume produced tend to drop dramatically.

The import and distribution of fertilizers and pesticides is one area in which economies of scale argue for continued concentration. Producer associations in most countries are unlikely to be able to handle the import and distribution of these products. The market may not be large enough in some countries to encourage significant supply competition. However, with the integration of regional African markets, and cross-border investment by some major ginning/marketing companies, some measure of competition could emerge from trans-national firms.

In recent years, reforms have been undertaken in several countries with mixed success. In some countries, after reforms the system has broken down and cotton production has plummeted. In other countries, reforms made some progress, only to be reversed later. In still other countries, reforms have been slow to be implemented or even launched.

Thus, the challenge of any reform program is to create a system that retains the advantages of the monopoly system while eliminating or significantly reducing the inefficiencies of that system. Key elements of reforms that have the potential of meeting that challenge are fairly well-known thanks to previous work by Badiane et al, Goreux, Baffes, and others (referenced earlier), as well as the personal experience of the author.

Various different schemes have been tried across the Continent, with uneven results. A general conclusion from most of the prior research and analytical work is that no single approach or package of reforms is going to work in all countries and situations. The mix of reforms and options must take into consideration the history and unique conditions that exist in each country. The author concurs with the four major conclusions of Goreux relating to cotton reform programs:

- An efficient credit system is a *sine qua non* for any reform
- Efficiency can be increased by providing more power to growers
- Research and extension systems cannot be exclusively in the public sector
- Marketing of seed cotton must be structured and regulated

In approaching reforms, there are two broad options:

- **Maintain the monopolies**, and institute new regulations and reforms designed to stimulate more efficient and competitive behavior on the part of the monopolies
- **Eliminate the monopolies**, and replace them with other entities designed to fulfill the various functions enumerated above

The first option of trying to improve the efficiency of the monopolies entails less risk. In Ghana, Benin, and Kenya, once the monopoly was dismantled, the new institutions did not adequately cover the “critical functions”, especially input credit, so production fell significantly. The second option entails more risk; yet it also offers more long-term gain if critical functions can be successfully undertaken.

In the ideal cotton economy, there should be a balance between coordination and competition, because each has costs and benefit. Even in the face of single State-run monopoly or several parastatal oligopolies, some incentive toward efficiency can be gained by empowering producers through organizational strengthening and/or co-ownership in downstream activities. This can be particularly important when it comes to pricing inputs and seed cotton, and for growers to derive some benefit from cottonseed and linter sales.

Contract production may be the mechanism that offers greatest promise for achieving a balance between coordination and competition. Contract production can encompass input distribution and credit, at least initially. It can also be used for seed production and multiplication, which was often handled by the State under the *filière* systems. Yet one must find a means of introducing competition on the cotton-buying end of the contract. In some countries, the national monopoly has been broken up into regional monopolies. When that happens, there still is no competition within each region, although the comparison of performance among the regional monopolies provides some incentive to become more efficient. In other countries, the national market is allocated based on historical ginning capacity. That approach provides little incentive to become more efficient. In general, the national markets are relatively small, so if competition is introduced, one may achieve gains from competitive efficiency, but perhaps at the expense of economies of scale.

Even when a firm decision to privatize and or liberalize has been made, it may not be wise to eliminate monopolies all at once, rather than in stages. However efficient they might be in an economic sense, at least they do provide critical services that permit the system to function. Input credit has long been the biggest barrier to successful liberalization. Existing systems must not be abandoned until an alternative system for input credit is assured.

One option is to do pilot activities on input credit within the existing monopoly framework. That is, producers in a certain pilot area would receive input credit from another channel instead of the monopoly. Once that system is shown to be effective, it can be expanded. Once a viable system for input credit has been found, the monopoly can ultimately be abolished. Another option is to examine best practices across the region—for instance in Zambia and Zimbabwe—then adapt and transfer to other contexts.

Misguided reforms can hurt rather than help the farmers, usually via failure to deliver required inputs, lower prices, uncertain markets, non-payment or delayed payments for seed cotton, reduced industry margins, or increased risk. As the saying goes, as far as structural and policy reform for cotton is concerned, “the devil is in the details.” Although the World Bank has been involved in the cotton sector reform for almost a decade, especially in West Africa but with significant work in the entire Sub-Saharan Region, the Bank seems to have found cotton sector reform to be exceedingly difficult, in both a political and a practical sense. An October 2004 confrontation between the Bank and the Government of Mali over unrealistic seed cotton price levels and the pace of privatization is a recent case in point.



In the view of the author, unless USAID can take the long view, make available substantial funding for institutional change, and accept significant development risks, the Agency should probably not get too involved in policy reform. USAID should focus instead on technical and marketing matters in which the United States has a clear comparative advantage

Nevertheless, if USAID still decides to get involved in cotton sector structural and policy reform, the Agency should proceed with caution, based on careful due diligence within each country of interest. Then the Agency should work closely with other development agencies that have chosen the same playing field. The World Bank tops the list, but USAID should also coordinate with 2004 EU ACP/EPA Cotton Initiative, since it promises significant technical and financial assistance for the cotton sector throughout Sub-Saharan Africa, including for policy and structural reform.

**Sub-option 3b: Strengthen the capacity of private agricultural organizations and key sector organizations to clarify their roles, better accomplish them, and better manage**

Sub-Saharan cotton economies are all characterized by: (1) a rich mixture of economic actors either directly or indirectly involved in the supply chain, and (2) support institutions, such as public institutions, regional development authorities, private sector service organizations, task-specific entities, and NGOs. Within the “filiere” model found in the Franc Zone countries, economic actors are sometimes described as “families” (of producers, input distributors, ginners, oilseed crushers, transporters, and financial intermediaries). More than one entity may form to represent a particular geographical area or affinity group. Since many producers are involved in the cotton economy, a vertical hierarchy may evolve from the village level (e.g. *Groupements Villageois*, *Associations Villageoises*, or cooperatives) upward through district, commune, department, and national level organizations.

As the privatization process runs its course, new types of organizations tend to emerge, typically along lines that emanate from French agricultural sector organization. The most notable example is the so-called Association Interprofessionnelle du Coton (AIC) which already exists in Benin and for which a feasibility/design study was done in mid-2004 in Mali.

At the producer level, the GVs or AVs usually play an important role in assembly of seed cotton, distribution of payments, and allocation of the “ristourne” rebate (where it still exists) for community development purposes. Yet most grass-roots producer groups are not capable of acting in a business-like manner, nor can they deliver extension and other services once the government or parastatal disengages. With few exceptions (e.g. the Union in Burkina Faso), second-tier or national associations are not generally ready to assume an active role in privatized input, ginning or marketing enterprises, either because they do not yet enjoy the full support of supposed constituents, or because they do not have a good grasp of the overall industry and global trading system.

To change this via capacity building for a large number of private agricultural organizations in any country is a massive, expensive, and slow undertaking. Yet if it is not done, the privatization process may just mean a shift from monopsonistic and paternalistic control by a single parastatal, to a similar level of control by a cartel of several private enterprises given regional concessions. If sufficient USG funding is available for a particular country whose cotton sector is in the throes of privatization, and no other donor has yet stepped in, USAID involvement in this field may well be warranted.

### **Sub-option 3c: Concentrate on improving technology generation and transfer systems during the transition toward privatization and liberalization, and afterward**

As a general principle, it is desirable that producers acquire and assert greater control over priority setting, quality, and cost control in the provision of research and extension services. This is equally true whether the services are currently handled by the public sector, by a private monopoly, or by providers of technical services in a competitive private sector.

If producers achieve greater control over these services, the probability increases that farmers will get the services they need and that costs will be monitored more closely. Producer associations are one mechanism for accomplishing this change, private research foundations another, and reliance on NGOs a third. The best mechanism will vary from country to country and situation to situation.

Generally speaking, privatization and liberalization in the cotton sector in Africa seem to have been associated with at least a temporary decline in effective capacity to further develop, test and extend agricultural technology. Yet it is not always easy to determine cause and effect, because the gap may appear before or after privatization and liberalization. And even in situations (such as Chad) where the government is still heavily involved in the sector, research and extension may have faltered or withered for reasons not directly related to the prosperity or context of the cotton sector. Sometimes (e.g. Benin) even after privatization and liberalization have begun, the government may continue to provide these public goods for a while in order to give the sector time to adjust. In other instances, Zambia for example, major private operators quickly acquired sufficient market share and power to essentially take over the technology generation and transfer function.

With respect to the Franc Zone countries specifically, during the pre-privatization period of the cotton sector, technology generation was handled across the cotton belt by the national agricultural research organizations (with close support from the French agricultural research institution CIRAD) and the national cotton companies. Useful research appear to have been done—more or less in proportion to the size and growth rate of the sector—but extension to the farm-level via the parastatal entity and its agents was reportedly often inadequate (except for major topics such as varietal, fertilizer and pesticide recommendations, which were promulgated by dictate and universally applied). Apparently many farmers never saw an extension agent because there were way too few, and as the sector expanded, it got worse.

As privatization proceeds, technology-related arrangements may be change naturally. For instance, to the extent that overall French involvement in the sector diminishes, CIRAD's longstanding cotton research programs might wither, or at least be redirected in and through Dagris-owned ginning companies rather than parastatals and the National Agricultural Research Organizations (NAROs). The Dagris website<sup>98</sup> seems to have been foreshadowing such a shift as it described the sustainable agriculture partnership agreement signed with CIRAD on October 7, 2003. In a post-privatization situation, it is not clear whether CIRAD would work with non-French ginning companies or not, but it is conceivable that a services contract could be signed to ensure continuity and take advantage of CIRAD's long involvement in this sector.

---

98

[http://www.dagris.fr/fr\\_vpagdet.asp?table=communiqu&titre=Communiqu%C3%A9s&id=52&Dateinv=79962097](http://www.dagris.fr/fr_vpagdet.asp?table=communiqu&titre=Communiqu%C3%A9s&id=52&Dateinv=79962097)

To varying degrees in each country, additional technical support is received for specific themes from a wide range of foreign and domestic NGO's, from the CGIAR network, as well as from projects and programs of limited duration. Such efforts often produce very useful results in terms of technology generation and transfer, yet the resource intensity they require often makes it impossible to scale them up to the national level.

Since the challenge of sustaining technology generation and transferring it to large numbers of small farmers still remains unmet in West Africa, while Southern African countries like Zambia and Zimbabwe seem to have managed the task well after privatization/liberalization, one useful intervention by USAID in this area would be to capturing, document, and then replicate or adapt best practices to other countries and regions.

### **Sub-option 3d: Improve linkages between U.S. and African research organizations**

Agricultural research institutions in the United States have had collegial and fruitful exchanges of students, professors and researchers with Sub-Saharan Africa for many decades. The topics have been wide-ranging: soil science, irrigation, agricultural engineering, genetics, plant and animal breeding, crop protection, animal disease control, seed science and technology, animal husbandry, crop production, range management, and so on. Many programs have been theme-specific, for instance, management of tropical soils. The mechanisms were varied as well: Title XII grants and cooperative agreements, Cooperative Research Support Programs, Cochrane Fellowships, and so on. However, restrictive foreign assistance legislation such as the Bumpers Amendment, as well as policy guidance emanating from it, has tended to discourage direct involvement in cotton production, post-harvest physiology, ginning, storage, and transformation.

Under the present circumstances—i.e. the Cotton Sectoral Initiative and the emergence of NEPAD's agricultural program CAADP—if the USG should now decide to relax those limitations in order to frame and deliver a proper development response that focuses on cotton sector productivity and competitiveness, it may be possible to point U.S. research capabilities more directly at the main challenges that face the cotton economy. This is particularly true for the C-4 countries of West Africa, but also applies to certain other USAID-assisted countries: Zambia, Malawi, Tanzania, Mozambique, and Uganda. Priority challenges would include: soil fertility and degradation; integrated pest management (IPM); and breeding for ginning, spinning or weaving characteristics.

One element of such a thrust would be to provide specific funding for collaborative agricultural research between and among universities, institutes, and other centers of excellence in both the cotton-producing countries and the United States. Another element would be to improve access for selected countries to any of the USDA centers of excellence and research or extension staff, via an earmark for scientific exchanges, conferences, workshops, invitational travel and other science and technology initiatives of benefit to the cotton sectors.

### **Sub-option 3e: Upgrade planting materials**

The most basic choice in cotton production is what type to grow, i.e. whether Pima (*Gossypium barbadense*) or upland (*Gossypium hirsutum*). The main advantages of Pima are that it produces a longer staple length, has better spinning attributes, has a much higher market value, and competes in a less crowded portion of the market. Upland has the advantages of better response to rainfed agriculture, and a much broader and deeper market. In the African continent, the only countries that concentrate on Pima at this moment are Egypt and Sudan, but it should be possible

to grow long staple cotton in places like Uganda, which has abundant rainfall. (It should be noted, however, that long staple varieties required roller rather than saw gins).

Whatever the type may be, it is very important to pick the right variety, especially one with genetic potential to generate good yields of lint and seed under typical growing conditions in the area of interest. Varietal selection largely determines market quality attributes such as color, leaf, micronaire, length and strength. There is no perfect variety for all environments. Some traits in cotton are more sensitive to environmental conditions than others; they are said to display more “variety-by-trait interactions”. Environmentally sensitive traits include lint yield and fiber fineness/maturity (i.e. micronaire). Lint and seed yield are very highly and positively correlated; the one increases along with the other. However, since the lint output typically accounts for 80-90% of the value of the crop, while cottonseed accounts for just 10-20%, lint yield is the more important factor to consider.

While growers in countries such as the United States, Australia and Brazil have many alternative seeds to choose from, farmers in Africa generally have little or no choice concerning which variety to plant. The germplasm usually comes from governmental research stations or from the French organization CIRAD. The seed is replicated on selected farms, and then distributed through selected gins or input suppliers, so what is grown is tightly controlled. There is some logic to this, since the gins do not want to handle varieties with considerably different staple length and other attributes, and exporting entities want to maintain varietal identity and image. (Just five years back, California lifted varietal restrictions for the first time in the San Joaquin valley. Egypt still tightly controls varietal selection at the district level, as well as does not permit individual gins to gin more than one variety a season. And Uganda remains essentially a single variety country).

On the other hand, for the country as a whole it is important to keep renewing germplasm and conducting research aimed at developing new varieties with superior traits. The rule of thumb in global cotton production is that even good performing varieties should be changed every five years, mainly to avoid pest and disease problems and reduce production risk. As shown in Figure Six on the following page, SSA countries do employ a wide range of varieties, with different characteristics and market value. Yet knowledgeable observers say that many African countries are relying on “tired germplasm”. USAID may want to consider supporting agricultural research in conventional varieties, as a complement to private sector-led research and development on transgenic varieties.

### **Sub-option 3f: Improve the enabling environment for agricultural bio-technology in general, and genetically-modified cotton in particular**

Historically cotton has been one of the crops most often criticized by environmentalists for its reliance on agrochemicals, which can contribute to pest resistance, contamination of soil and water resources and/or toxic impacts on workers or people living nearby. Then as use increased, production costs also rose. Yet with the advent of agricultural biotechnology, as well as biological controls, certain important pests like the bollworm can now be controlled at lower cost and without creating resistance.

Use of genetically-modified (GM) crops in general has been growing globally at a tremendous pace, as explained in greater detail in the discussion paper presented in Annex D. Estimated area

**Figure Six**  
**Hierarchy of Global Cotton Quality, by Variety, Staple Length, and Ginning Method**

(in approximate order of price CIF North Europe as of 11/06/03)

Saw ginned cotton

Roller Ginned Cotton

**Extra fine cotton (long staple)**

Egyptian Giza 70, 88, 86  
American Pima Grade 2 (1-7/16")  
Israeli Pima H1 (1-7/16")  
Sudan Barakat Grade X4B  
Central Asian (1-3/8")

**Fine and High-Medium cotton (Strict Middling, 1-1/8")**

Calif Acala SJV SM (1-1/8")  
Zimbabwean SM (1-1/8")  
Australian SM (1-1/8")  
African 'Franc Zone' (SM 1-1/8")

**A Index: Medium cotton (Middling, 1-3/32")**

US Calif/Arizona DPL Midd. (1-3/32")	Tanzanian "AR" Type 2 (1-3/32")
US Memphis/Eastern Midd. (1-3/32")	
Australian Midd (1-3/32")	Indian J-34
Syrian Midd. (1-3/32")	
Uzbekistan Midd. (1-3/32")	
US Orleans/Texas Midd. (1-3/32")	Sudan (Acala 1RG)
Brazilian Midd. (1-3/32")	
African 'Franc Zone' Midd. (1-3/32")	
Spanish Midd (1-3/32")	
Greek Midd. (1-3/32")	
Turkish S. Eastern Std.1 (1-3/32")	Turkish Izmir
Iranian Midd (1-3/32")	
Mexican	
Chinese (329)	
Paraguayan Midd. 1-3/32")	
Pakistan Punjab SG 1503	

**B Index: Coarse count cotton (Strict low middling)**

Uzbekistan SLM (1-1/6")	
Brazilian SLM (1-1/16")	
US Orleans/Texas SM (1-3/32")	
Turkish S. Eastern Std.2 (1-3/32")	
Indian J-34 S.G.	
Pakistan Punjab SG 1503 (1-3/32")	Turkish Adana
Chinese 129, 329, 527	
Argentine Grade C-1/2, (1-1/16")	
Argentine Grade D (1-1/16")	

for genetically modified crops in 2002 was 58.7 million hectares (145 million acres).<sup>99</sup> The increase in global area between 2001 and 2002 was 12 percent, but the increase in developing countries was 19 percent. Developing countries accounted for 27 percent of GM crops in 2002. The US is the largest adopter by far, accounting for 66 percent of total use. However, GM crops were used in 16 countries in 2002, with Argentina (23%), Canada (6%), and China (4%) being by biggest users.

The most important GM crops are soybeans (62%), maize (21%), cotton (12%), and canola (5%). GM varieties account for 51% of the global soybean area, followed by 20% for cotton, 12% for canola, and 9% for maize. China has had the largest one-year growth of 40% in Bt cotton, with that variety occupying over half its cotton area. South Africa was the only African country with GM crops in 2002, but others are expected to follow soon including Burkina Faso, Kenya, and Zimbabwe.

With respect to embedded traits, the largest is herbicide tolerance (75%), followed by insect resistance (Bt) (17%) and the combination of *Bacillus thuringiensis* (Bt) and herbicide tolerance (“stacked traits”). Options for grower seed choice now include Bt, herbicide resistance, the combination of Bt and herbicide resistance, and another insect resistant variety containing Bt plus other insect resistance.

GM crops remain controversial, with the Europeans and Americans holding quite strong and opposing viewpoints, and some very vocal NGOs also opposing their use. The US industry and government have taken the position that GM crops are safe for human consumption and pose no significant environmental risk. On the other hand, European consumers and governments generally have taken the view that the potential risks are too great compared with the benefits. Yet on November 7, 2003, new rules on GM traceability and labeling and GM foods and feeds went into effect within the EU, and they are being interpreted as a positive development by the biotech seed industry. GM cotton is generally treated differently from GM food commodities. Since cotton lint is not eaten by humans (although cottonseed oil is), it is one step removed from the perception of direct danger. The *Bacillus thuringiensis* gene in Bt cotton comes from a soil microbe. The gene is not expressed in the cotton fiber, and Bt cotton fiber is indistinguishable from non-GMO cotton. Yet none of this keeps the anti-GMO forces from taking strong advocacy positions against use of GMO cotton in developing countries.

The increase in use of transgenic cotton has been geometric. With a 12% share of all GM adoption in 2002, cotton is one of the most important transgenic crops. As of 2002, GM varieties made up 20% of the global cotton area, with a marked upward tendency; were grown in at least nine countries – seven developing and two industrial; and covered more than 4 million hectares. Bt cotton could potentially be used on 4 times that area, i.e. half the global area in cotton. China had the largest one-year growth of 40% in transgenic cotton, which now occupies over half its cotton area.

South Africa was the first SSA country to allow Bt cotton commercially. Zimbabwe began experimenting with it in 2000/2001 and is moving toward commercial use. Uganda has just published its first proposed bio-safety legislation, and is reportedly poised to approve GM cotton for the next season.<sup>100</sup> Kenya has been experimenting with Bt cotton. Thus far West African countries have had limited experience with bio-engineered crops in general, and Bt cotton in particular, but Burkina Faso has moved aggressively on Bt cotton and Mali is setting the stage

---

<sup>99</sup> Clive James, “Global Status of Commercialized Transgenic Crops: 2002,” ISAAA Brief No. 27 -2002.

<sup>100</sup> <http://www.bharattextile.com/newsitems/1979046>

with a bio-safety protocol and negotiations on field trials. Benin has been more cautious, placing a moratorium on it in 2002 due to NGO pressure and high-level concern, yet late in 2003 Benin announced its intent to develop its own Bt cotton varieties. On the other hand, Chad is not yet considering Bt cotton seriously.

There are many reports and studies on the potential benefits and problems with GMO crops. On balance, recent studies from around the world do seem to suggest that Bt cotton is likely to enhance yields, reduce costs and have less impact on the environment than conventional cotton, but it is not a panacea. On the other hand, clearly there is a huge opportunity cost for African countries of not adopting GM technology. Much of the interest in Bt cotton in South Africa has derived from a study of small farmers done by Ismael *et al.* and reported in 2001 and 2002.<sup>101</sup> They concluded that farmers benefited from use of the Bt cotton variety. The increase in yields and reduction in pesticide costs outweighed the higher seed costs. Bt cotton yields were 18 and 60 percent higher than non-Bt cotton in years 1 and 2 of their study respectively. Pesticide use was reduced 13 percent in year one and 38 percent in year two. Gross margin was 11 percent higher in year one and 77 percent higher in year two. Some of these results were not statistically significant, yet the authors conclude that by the second year adopters were clearly better off than non-adopters.

There are many other reports and studies on the potential benefits and problems with GMO crops in Africa. The International Service for the Acquisition of Agri-biotech Application (ISAAA) is a not-for profit organization whose objective is to help alleviate poverty through sharing of biotechnology applications. They have understandably been quite positive on Bt cotton.<sup>102</sup> On the other hand, another NGO called Genetic Resources Action International (GRAIN), has been quite critical, especially in West Africa.<sup>103</sup>

Bt cotton was used for the first time in South Africa in the 1998/99 season, when 12 percent of smallholders adopted the Bt variety. The following year, an estimated 40 percent of smallholders used it in South Africa. About 95% of the cotton in South Africa is produced by 300 commercial farmers. The other 5% is produced by about 3,000 small-scale farmers.<sup>104</sup> GM cotton adoption has progressed quite rapidly. Average yields of adopters of Bt cotton were considerably higher than non-adopters, with large farms achieving a gain of 541 kg/ha and small farms 180 kg/ha. The income effect of adoption of Bt cotton is important both for small and large farmers.

The promise of Bt cotton in areas with high infestation of bollworm seems quite high. Testing is needed for each distinguishable area in African cotton-producing countries, but the potential has been demonstrated in many different countries around the world. The *ex post* analyses in South Africa, as well as the *ex ante* analysis for Mali show significant profit gains from Bt cotton adoption. The South Africa case demonstrates that when smallholders are specifically targeted, they can reap significant benefits. Fortunately, this technology is not nearly so scale-dependent as many others, since the technology unit is the seed. Small and large farmers alike can obtain benefits.

---

<sup>101</sup> Yousouf Ismael, Richard Bennett, and Stephen Morse, "Biotechnology in Africa: The Adoption and Economic Impacts of Bt Cotton in the Makhathini Flats, Republic of South Africa," paper presented at the Biotechnology Conference for Sub-Saharan Africa, September 2001, and "Benefits from Bt Cotton Use by Smallholder Farmers in South Africa," *AgBioForum* 5 (1): 1-5, 2002.

<sup>102</sup> Clive James, "Global Review of Commercialized Transgenic Crops: 2001 – Feature Bt Cotton."

<sup>103</sup> Devlin Kuyek, "Genetically Modified Crops in Africa: Implications for Small Farmers," August 2002.

<sup>104</sup> M. Goose, JF Kirsten, and L. Jenkins. "Bt Cotton in South Africa: Adoption and the Impact on Farm Incomes Amongst Small-Scale and Large Scale Farmers." *Agrekon* Vol. 42, No. 1 (March 2003)

In order to effectively and safely implement GM crops in Africa, each country will need to implement a bio-safety system to regulate transgenic products. The safe introduction of any bio-engineered crop involves an assessment of risks of introducing the crop. This requires human resources that are competent in biological sciences with an ability to scientifically assess potential risks and/or benefits of the crop. In addition to the risk assessment there is need for risk management and inspection and monitoring of crops. This capacity is lacking in most countries in West Africa, and apparently also in Zambia, Malawi, Tanzania, Namibia, and Mozambique.

The key components of bio-safety frameworks are:

- ◆ A Government policy on bio-safety, often part of a broader policy on biotechnology.
- ◆ A regulatory regime for bio-safety (includes act and regulations).
- ◆ A system to handle notifications or requests for consents for certain activities, such as registration of activities (contained use), field releases or placing on the market of GMOs.
- ◆ A mechanism for monitoring and inspection.
- ◆ A system for enhancing public awareness and managing public information.

To improve the enabling environment for agricultural biotechnology (including Bt cotton) in West Africa and other selected countries, USAID should consider either targeted technical assistance or capacity-building. If a country in the near term wishes to work with Bt cotton before an indigenous bio-safety assessment capacity is in place, USAID could arrange external support to establish bio-safety measures that would allow field-testing and also to evaluate new applications. In West Africa at least, this support would likely come via the Program for Bio-safety Systems (PBS). In the long term, a more cost effective way for these functions to be handled would be to have a regional or (in large countries) a national office with the proper expertise to do an initial bio-safety assessment. If a regional office does an initial evaluation of bio-safety, individual countries would then be able to make their own informed decision as to whether a crop should be allowed entry for testing in their country. Ideally each country that USAID assists would have bio-safety policies and regulations compatible with a generally accepted regional model, probably the one being promulgated by the African Seed Trade Association (which is affiliated with the American Seed Trade Association, whose members include all the major agricultural biotechnology companies).

### **Sub-option 3g: Reduce high seeding rates, maintain seed quality, and improve the policy and regulatory environment for the seed system**

Conventionally bred germplasm still predominates in the Sub-Saharan countries, but there has clearly been a trend toward greater acceptance of GM cultivars. Whether the planting materials are conventional or transgenic, getting the best possible seeds into the hands of farmers in a timely manner and at reasonable cost remains the foundation of all crop production. Improved seeds are the most basic embodiment of technology, and they have a dramatic impact on productivity, competitiveness and sustainability.

In most of the Sub-Saharan countries, much can be done to improve the seed system as it relates to cotton. Breeding stations are generally weak and lack resources to do the range of evaluations necessary for effective selection of varieties. Plant breeding work is barely occurring due to the lack of funds to conduct field trials. For those reasons, a given variety is usually planted continuously from the same original source for up to 10 years. This results in genetic drift, which causes changes in the performance and quality factors of a variety. Despite the physical isolation of the seed production of selected varieties, there is no check on seed purity and seed health.



In time, seed multiplication and distribution are both likely to go private throughout the region, but that will not be easy as long as seeds continue to be given out in-kind, without specific charge, as currently occurs in most of West Africa. To get the ball rolling there will have to be a transition toward charging openly for seed, or at least valuing it in an accounting sense and then having either a bank, a gin or a payment settlement bureau deduct it from liquidations. Recent interviews with West African producers suggest that they are prepared to start paying for good quality seeds. Ginners and marketers are also aware of the importance of improving on seed quality by encouraging a more vibrant, liberalized, market-oriented seed industry

At the present time, producers in many SSA countries use high seeding rates to increase their chances for good seedling establishment, even with poor quality seed. Seeds are often distributed with lint still on and with treatment. Unfortunately cottonseed with fuzz or without de-linting is susceptible to seed-borne diseases. Some of these diseases dramatically impair seed germination and vigor. Because of this adverse effect on germination (the degree of infection dictates the effect on germination) high seeding rates of 50-60 kg/ha are used, which wastes an important resource and places serious limitation on the cost effectiveness of a seed multiplication program.

In the C-4 countries, and probably elsewhere in SSA, three seeds are generally planted rather than one. This implies excess transport costs for delivery, unnecessary consumption, and the use of seed that should have been discarded. The resulting need to thin, and more often replant, also adds cost to producers. Moreover, delayed thinning or replanting can reduce yields.

At the present time, farmers are often allotted a given quantity of seed in accordance with planting intentions, but without guarantee of germination percentage or quality. In West Africa the quantity of seed allocated is typically three times the required rate of de-linted seeds (16-20 kg/ha). If germination is sub-optimal, despite the dense planting, the farmers must buy the extra seed needed to complete the planting. The extra seed is sometimes bought through informal sources from another farmer or at the market place, with no guarantee of genetic purity or quality. Low quality seed is a major cause of poor stand establishment due to low viability, as well as poor seedling vigor, which leads to increase susceptibility to seedling diseases and early season pest damage. This adds to the cost of production for the cotton producers.

When fuzzy seed is used, the linters are totally wasted. Moreover, separation of the well-developed mature seeds from the immature and damaged seeds cannot be achieved with de-linting. Yet people seem to understand that de-linting allows for separation of good, vigorous heavy seed from less vigorous lighter seed.

In those countries that have mechanized cotton production (not the norm in Sub-Saharan Africa, of course), de-linted seed is required to plant with machinery while guaranteeing quality.

Despite its many advantages, de-linting of cotton seed has not generally been practiced in the C-4 countries. Some capacity does exist to do acid de-linting. Burkina Faso reportedly has one plant up and running, and is building another. Chad has started de-linting on an experimental basis. Given the weight involved, distances, perishability of cotton seed, and phytosanitary concerns, it is not likely that a de-linting plant in one country will ever service the needs of another.

For all of the above reasons, USAID technical assistance and training for the seed industry would be a very productive investment.

### **Sub-option 3h: Reduce uncertainty for farmers and costs for the cotton economy by expanding and improving financing for production, ginning and marketing**

The availability, cost and timeliness of credit needed for the various stages of the cotton cycle is often cited as a problem by stakeholders, especially in those SSA countries that have a relatively weak cotton sector or which are in the midst of privatization and liberalization.

Without agricultural credit in the form of cash, small farmers must rely on the cotton system to supply (in-kind) agrochemicals, fertilizers and seed. Field visits conducted in West Africa in late 2004 indicated that small farmers there divert about a quarter of the fertilizer, and presumably some of the pesticides as well, to crops other than cotton—mostly maize and other food crops. One key informant in Mali revealed that farmers sometimes quietly sell some of the inputs received on credit at prices that are below nominal cost, in order to generate desperately need cash. Of course, that can lead to reduced cotton yields and a greater debt burden.

The lack of production credit also prevents many small farmers from acquiring backpack sprayers, buying or renting oxen and plow, and buying or renting small tractors. Since labor availability in SSA countries is often a problem during the season, especially during land preparation and harvesting time, and particularly since the onslaught of HIV/AIDS, farming tasks may then be delayed or not done at all, either of which can adversely affect yields and income.

Prior to privatization, credit has generally been provided by the publicly-owned agricultural development banks directly to growers in groups or via state-owned or parastatal ginning and marketing companies. When the weather or world prices have not been good, this system has often led to heavy debt on the part of farmers, to de-capitalization of the agricultural bank, or to a drain on Treasury coffers.

After privatization, credit is more often provided either by savings and loan associations or their equivalent, or by input suppliers (i.e. by the importer of agrochemicals to its distributors who on-lend to grower groups) or by service providers (i.e. by the ginning and marketing company to associated producers). After a shake-out stage that can often be awkward, countries such as Zambia that moved expeditiously to a fully liberalized, privately led cotton economy have tended to display the best recovery rates on production credit and also to independently manage financing for the ginning and marketing cycle. For those countries still caught in the middle—Benin, for example—financing has proven to be a serious problem, resulting in delayed delivery of fertilizers, incomplete or delayed payment of minimum price guarantees or supplemental rebates, and greater debt loads for farmers.

Although there is a clear need for better and lower cost financing, especially for un-privatized and un-liberalized sectors or those in transition, USG experience with agricultural lending has generally not been good, and the cotton economy in Sub-Saharan Africa presents both an unusually high financing requirement and unusual complexity. Intervention in this area by USAID is not to be recommended.

### **Sub-option 3i: Help upgrade the production system**

In some SSA countries, fundamental matters of productivity still need to be addressed. The most basic decision in growing cotton (or any other crop) is which production system to use: irrigated versus rain-fed. That choice is a function of plant physiology, local growing conditions, availability of capital, and farming strategy.

Cotton can grow on soils with a pH of 5.5 to 8.0, but the optimum is 7.0-8.0. It performs best when the temperature ranges from 20-30 degrees C, but can be grown between 16 and 35 degrees C. It is sensitive to frost and strong or cold winds. The boll develops best when the temperature is 27-32 degrees C. Depending on variety, it is either a short day or day neutral crop. The typical time to harvest is 150-180 days, although some 120-day varieties exist.

Although cotton is not particularly demanding in terms of water, it does require a certain minimum, more so in some stages than in others. FAO research on water requirements for different crops found that cotton has a 0.2 yield response to water deficit in the vegetative stage, a 0.5 response in the flowering stage, and a 0.25 response in the ripening stage, which means that it is most sensitive to water stress when flowering. For the entire cycle of the cotton plant, the yield response was 0.85, which is less than sorghum (0.9) or maize (1.25).

Rain-fed production requires less capital investment, but leaves the crop completely exposed to the vagaries of precipitation, temperature and evapo-transpiration, and generally results in yields that are lower and less consistent. Irrigated production requires more capital investment, usually both by government and the grower, but it allows the farmer more flexibility in terms of when to plant, which varieties to use, and how to fertilize, and it generates greater output, gross and net returns per hectare.

Approximately 45% of the world's cotton production is irrigated. Where irrigation is used, the most prevalent technologies are flood or furrow, but there is some use of center pivot or drip systems. Not surprisingly, irrigation is more common in developed than developing countries, although there are some notable exceptions (Egypt, Sudan, China). Within Sub-Saharan Africa, South Africa has the largest percentage of irrigated acreage, mostly in the Northern Cape Area. About 15% of Zimbabwean production is irrigated, and historically 8% of Kenya's (Lake District). For some growing areas in USAID-assisted countries, it will make sense to encourage conversion to irrigated cotton production, but it would be inappropriate to make this Agency policy.

Another major question is whether to mechanize or not. For soil preparation, again the developed countries make the most use of machinery. In the SSA region, only South Africa relies 100% on tractors, while Zimbabwe is only 20% reliant, and most other SSA countries depend mostly on animal traction. As far as harvesting methods are concerned, the developed countries rely almost completely on machine harvesting, while in the SSA region, only South Africa (in the Northern Cape area) uses even 40% mechanization. As HIV/AIDS continues to spread in the SSA region, and as family labor becomes scarce, in some places there may be no alternative to mechanization other than exiting cotton production. The two main pathways to increased mechanization are shared ownership of farm equipment and machinery through producer organizations, or else the provision of production financing required to rent the machinery or purchase service. Again for some growing areas in USAID-assisted countries, it will make sense to encourage mechanization, but without making it a policy. It is still important to recognize that African farm labor has a low opportunity cost, which is one of its few competitive advantages in cotton. And the development resources required to mechanize are likely to be scarce for the foreseeable future.

In sum, for those countries in which cotton has serious potential for expansion—Tanzania and Namibia, for example—USAID may want to begin with an agronomic assessment that covers the kinds of basic decisions as to technology and production systems noted above.

### **Sub-option 3j: Arrest the deterioration of soil fertility and degradation of soil structure in a significant portion of the cotton producing areas**

Many informed observers believe that soil degradation and depletion is perhaps the single most important constraint to food and economic security in Sub-Saharan Africa. In many countries it already presents a serious problem in the production of food and commercial crops, and over the longer term threatens the sustainability of existing farming systems.

Farmers are mainly smallholders who must contend with increasing population pressure on available land, a low level of mechanization, short fallow, limited rotational options, and risky rainy seasons.<sup>105</sup> Their poverty, small scale of operation, inability to get bank credit, limited access to market, and low levels of technology all contribute to farming practices that can exacerbate soil degradation.

The traditional method of farming in many areas--West Africa, for example--is shifting cultivation. Such a system needs a vast area of land to be viable. The increase in production in Mali and Benin especially has come mainly from expansion in area.

Exploitation of marginal lands in fragile ecosystems also accelerates desertification in some areas. The productivity of shifting agriculture has plummeted, especially since the Nineties. In most of the cotton growing areas, a fallow system is used, whereby cotton is rotated with food crops, most often maize, sorghum, cowpeas, cassava and peanuts. The usual recommendation is to grow cotton only once every three years on a particular piece of land, but once every two years appears to be common, and some farmers grow cotton each year without a break. Cultivating already cleared land more intensively and more frequently may mean less pressure on marginal lands, yet it often leads to mining of the soil's nutrients (mainly nitrogen, phosphorus, organic matter), lower soil fertility, loss of plant cover and eventually to loss of the soil itself through erosion.

An extensive body of research and literature on developing country agriculture clearly indicates that low soil fertility is the major factor limiting increased crop production from finite areas of land.<sup>106</sup> And recent data from the main cotton producing areas of West Africa indicates that yield increase is slowing down, stopping or even falling, except in newly farmed lands whose nutrients have not yet been exhausted.

---

<sup>105</sup> Adapted from: Alioune Fall and Adama Faye, Minimum tillage for soil and water management with animal traction in the West-African region, Conservation Tillage with Animal Traction: A Resource Book, edited by P.G. Kaumbutho and T. E. Simalenga, ATNESA, 1999.

<sup>106</sup> Adapted from: "Alleviating Soils Constraints in West Africa (Agronomic Update)", Fertilizer International, May 1993.

Testimony of farmers, soil scientists along with data showing yield decline, confirms the trend of soil degradation and nutrition depletion at many cotton-producing sites. For example, some areas in the Eastern part of Chad may soon have to be abandoned for cotton production. These populated areas may be having little or no restorative fallow time and limited inputs to implement required management practices.

In response to this challenge, USAID might consider enlisting the support of USDA's National Resources Conservation Service (NRCS) and the many US university-based centers of excellence, in order to design and implement a soils management program for cotton-producing areas, focusing initially on the C-4 countries. The program should be large enough to have a detectable aggregate impact in all four countries. This would need to be a long-term undertaking.

### **Sub-option 3k: Work to improve input procurement, distribution, and use**

Timely provision of high quality agricultural inputs at a reasonable price is critical to success in cotton. Cotton shows a strong response to fertilizer applications, yet its use on African cotton production varies greatly from country to country. For example, a 1999 ICAC survey found that 85 percent of farmers in Kenya, 70 percent in Madagascar, 65% in Tanzania, 40% in Zimbabwe, and 50% in one major area of South Africa, used no fertilizer at all. On the other hand, the West African producers showed much higher rates of utilization, which partly explains their higher average yields. Yet the facts that uniform or just a few formulas are used, that there is diversion of fertilizer intended for cotton toward other crops or for sale in the marketplace, and that farmers have limited understanding of the underlying principles, all mitigate against optimal use and therefore optimal yields.

Many growers and knowledgeable observers believe that the delivered (farm gate) price for agrochemical inputs is inherently too high, both as a percentage of total price and relative to what costs should be if there were more competition, more efficient transport and distribution, more transparency, and less dependency on supplier credit.

Although the idea of pooled purchases is often raised, it is not clear whether they would provide any advantage over the current tendering system, because the countries themselves and individual farmer organizations would both face higher credit costs from world manufacturers than the private firms that usually dominate the industry in SSA counties. Work done in recent years by IFDC, IFPRI and others on the agrochemical procurement system in different parts of SSA needs to be closely examined to see whether lower cost solutions are really feasible.

Since small cotton farmers in Africa lack cash, and often cannot get bank credit for lack of collateral or agricultural lending, they usually need input credit from agrochemical suppliers or the gins. However, the resulting 9-12 month credit cycle and associated risk inevitably raises input costs, contributing to the sense that farmers are not getting fair prices on fertilizers and pesticides.

Given all of these factors, the overall objective of a possible USAID intervention in this arena should be to help make sure that in each assisted country the vast majority of cotton farmers are ensured access to high quality fertilizers and pesticides in a timely manner and at a delivered cost that fairly reflects world prices. Policy reform and technical assistance in the field of agrochemical inputs, whether on purchasing, formulation, pricing, transport costing, or utilization, could have a high return indeed.

### **Sub-option 3I: Expand the use of good agricultural practices**

Even though cotton may be the only viable cash crop in certain agricultural areas, large-scale commercial production of cotton—especially using high-input technology—has often been criticized for its negative environmental effects. Even when prices are low, there has been a tendency towards monoculture in many cotton-growing areas, probably borne of hope, tradition, lack of alternatives, and sometimes just the availability of production financing. In the producing areas where growers have become heavily dependent on irrigation and fertilizer inputs, cotton production is often associated with low biodiversity and soil impoverishment.

In developed countries, the most common criticism is intensive use of insecticides and leaf defoliants to assist with harvest. While leaf defoliants are less common in developing countries, historically the heavy use of pesticides in cotton was associated with a wide range of issues: selection of which agrochemicals to use, product quality, excessive use, e, misapplication, poor disposal of containers, undesirable fate and transport in soil and aquifers, etc. For cotton especially—but indeed for any crop that the Agency supports—it is important to ensure the use of internationally sanctioned and locally registered and approved products of certifiable quality, and to train farmers and certified pesticide applicators in proper handling and usage.

A renewed push to expand cotton in Africa risks creating similar problems—especially where GM cotton has not been allowed, where labor is becoming scarce, and where information outreach to farmers is deficient. Although C-4 cotton is not a monoculture because of rotations and fallow periods, there is increasing evidence of pest and disease resistance, most recently with pyrethroids in the late Nineties, after which a significant increase in the use of Endosulfan occurred. The latter has been associated with serious pesticide misuse. Continual expansion in area planted, coupled with more intensive cultivation on existing farms, will necessitate increased use of IPM and IPPM (integrated pest and production management), which both involve scouting, action thresholds, pheromones, beneficial parasites, and so on.

Component technologies exist in SSA to address all the main technical issues associated with cotton production. In the case of the C-4 countries, for example, the French research organization CIRAD, in collaboration with the National Agricultural Research Organizations (NAROs) in each country, has done considerable work on cotton production systems and on farming systems that include cotton. However, such work often does not get to farmers in large numbers, and even when it does, the rate of adoption may not be as high as hoped for, and in any event a more comprehensive approach is preferable.

Therefore, if the Agency elects to fully engage in the cotton sector in selected SSA countries, it should also introduce the concept of Good Agricultural Practices (GAP), both because it is a good approach in itself and because sooner or later its variant EUREPGAP will probably be applied to cotton. GAP is indispensable in modern agriculture for various reasons: (1) to remain competitive in major markets such as the EU; (2) to protect the health of farmers and co-workers; (3) to avoid harm to soil/water/wildlife resources; and (4) to prevent uncontrollable pest and disease outbreaks that will prevent further farming. In West African countries especially, a focal point for GAP would be better soils management, which is necessary to maintain soil fertility, prevent soil degradation, limit erosion, and stop the mining of soil nutrients.

Promoting IPM and GAP goes hand in hand with improved production management. In the late Nineties and early 2000's, the USAID-supported IDEA project in Uganda demonstrated in a convincing manner that simply coordinating planting dates for entire blocks of small units raised the productivity and profitability of smallholder cotton production. Coordination allowed for

greater efficiency in input delivery, land preparation, pest and disease management, harvesting, collection and marketing.

The overriding objective of a possible USAID intervention based on Good Agricultural Practices (GAP) for cotton should be to reduce the use of production practices that are potentially harmful to humans, other animals, plants, or the environment, while encouraging the use of good agronomic practices, which include conservation farming, integrated pest management, and appropriate pesticide use.

### **Sub-option 3m: Reduce post-harvest losses and costs through better handling systems and practices**

Much could be done in SSA countries to improve the logistics of seed cotton handling, storage and transport from the farm to the gin, of cotton seed from the gin to oilseed mills to destination ports, and of cotton lint from the gin to foreign ports of entry. Anecdotal evidence and field observations made in late 2004 by the West African Cotton Sector Assessment Team suggest that throughout the supply chain for cotton and its derivatives, significant losses of volume and value occur, and as a result excess costs are incurred. There are various causes: (1) the small lots and very basic transport methods that characterize small producers; (2) overloading of conveyances, which leads to spillage; (3) limited use of covers and tendency to leave products exposed to the elements for long periods; (4) lack of equipment such as module-makers needed to compress and then easily protect the seed cotton before it can be ginned; (5) lack of storage facilities; and (6) underestimation of the nature and extent of the costs themselves.

If USAID wishes to mitigate this situation, what is needed is: first, a quick study of post-harvest losses of all types seed cotton, cotton lint and cotton seed, necessary to pinpoint and quantify the problem; secondly, a pilot project in several different countries aimed at experimenting with and perfecting improved logistical methods for handling cotton; thirdly, limited purchase of equipment such as a module maker; fourthly, contracting for a Guide for Post-harvest Handling of Cotton, to be done in several languages, and then distributed widely along with visual aids such as posters; and lastly, commissioning a study of the pros and cons of switching to containerized shipment of baled cotton from selected countries.

### **Sub-option 3n: Upgrade ginning technology and practices<sup>107</sup>**

Although it is often said that Africa has a quality advantage because of hand harvesting, that depends greatly on whether the gins pay for seed cotton based on weight alone (which encourages rocks, etc), on how well the intake of seed cotton is managed to avoid contaminants, on the quality assurance training and supervision of harvesters, and on how well the ginning process works.

Genetics is a key determinant of fiber quality, both in initial quality in the form of seed cotton, and in the quality of the lint that emerges after ginning. While the ginning process can only preserve quality, it can greatly affect the market value of lint. The quality of ginned lint is directly linked to the pre-ginning quality. What happens at the gin largely governs the qualities that textile mills seek in terms of neps, short fiber content, and seedcoat fragments. As the ICAC explains:

”A ginner must have two objectives: (1) to produce lint of satisfactory quality for the grower’s

---

<sup>107</sup> ICAC, “Report of an Expert Panel on Ginning Methods”, September 2001.

classing and market system; and (2) to gin the cotton with minimum reduction in fiber spinning quality so that the cotton will meet the demands of its ultimate users, the spinner and the consumer. A single “best ginning practice” does not exist for all cottons—each lot of cotton requires careful assessment of its needs, and thus different ginning practices. Moisture content, length of storage, amount of high-moisture foreign matter, variation in moisture content throughout the stored mass, initial temperature of the seed cotton, temperature of the seed cotton during storage, weather factors during storage, and protection of the cotton from rain and wet ground all affect seed and fiber quality during seed cotton storage...The ginning process can significantly affect fiber length, uniformity, and the content of seedcoat fragments, trash, short fibers, and neps. Choosing the degree of gin cleaning is a compromise between fiber trash content and fiber quality. . The best ginning practice is simply to use the minimum machinery for a particular cotton to achieve the optimum market grade. Good gin operations use only the amount of drying, moisture restoration, and cleaning required to meet customer demands.”<sup>108</sup>

Most gins in Sub-Saharan Africa (except in Sudan, and partly in Uganda and Tanzania) are “saw gins”. Although it is often said that “roller gins” produce better cotton lint, this is not necessarily true. For Pima-type long and extra long staple cottons, roller gins are the most appropriate choice. When used on upland cottons, a roller gin will actually lower the market value of the lint, resulting in a penalty for “presentation.” This is an indicator of the degree of “roughness” or “smoothness” of ginned lint cotton. It is significant because generally speaking smooth cotton generates less spinning waste and leads to a more uniform yarn than rough cotton.

It is important that African countries not only choose the right technology and equipment for the type of cotton that is to be ginned, but also that gin operators and managers be educated to the level of global best practices. These are areas in which USAID could provide technical assistance and training.

A third issue with respect to the ginning process is how the gin obtains raw materials. Most gins in developing countries traditionally have purchased seed cotton outright, determining base price and payment (later) due upon receipt, then sometimes adjusting it for final throughput and quality once the ginning process is complete, or after the marketing has occurred. Outside of Africa, however, it is not unusual to find ginning operations that simply provide service for a fee. The latter is most appropriate when the customer has sufficient volume to market independently of the ginning enterprise. In the African context, it is much more common for the gin to serve in effect as a chokepoint through which the seed cotton must flow, and therefore the owner has most of the leverage. This was certainly the case in highly regulated cotton marketing systems under government or parastatal control, and remains true today even where private firms have stepped in. Seed cotton procurement, ginning, marketing and payment practices together constitute the most sensitive and complex topic in the African cotton economy. .

### **Sub-option 3o: Support the creation and initial operation of a regional ginning school in West Africa, East Africa and/or Southern Africa**

The purpose of this intervention would be to provide systematic training of gin managers and technicians in each of the regions Africa, starting with in the C-4 countries, in order to improve the productivity and efficiency of ginning operations as such while also improving the market quality of lint, cotton and by-products produced at the gins.

---

<sup>108</sup> Idem.



Most SSA countries have good (although often old) equipment, and achieve relatively high out-turns (42-44% when hand-picked, as compared with 36% in the US for machine-harvested or stripped seed cotton) as well as low cost of operations. Yet there is always room for improvement (whether through better moisture management, better control of contamination, better handling procedures, or better storage of seed cotton and baled lint).

Moreover, as privatization proceeds in any of the countries, changes on ownership and personnel turnover could lead to a decline in the levels of skills and experience. To the extent that producer groups gain ownership shares in newly privatized gins, they will need to be brought up to speed in all aspects of gin management, operation and maintenance.

The United States has strong comparative advantage in establishing and running such schools, because gradually over a period of many years capacity-building needs relating to ginning were successfully resolved through collaborative efforts of private industry, the USDA, and a network of universities. The US “gin schools”, originally developed by personnel from USDA and NCC/NCGA, are now jointly sponsored by the National Cotton Ginners Association (NCGA) and the three USDA/ARS Ginning Laboratories. The schools are administered by the NCGA. Each school is held on site at each of the three USDA Ginning Labs (Lubbock, TX; Stoneville, MS; and Mesilla Park, NM). Stoneville has a micro-gin that enables students to see what is happening much more clearly on a small scale, through see-through panels.

The U.S. cotton industry holds three schools each year. Approximately 25 industry experts from USDA, machinery manufacturers, Cotton Incorporated, universities, individual gins and ginning associations serve as instructors at each school. A large percentage of gin managers and operators in the United States have attended one of these schools. Each program consists of three levels of training, taught concurrently over a three day period. Subject matter in the first and second levels focuses on the mechanics of the ginning process, but also introduces the students to some of the history of the US industry, impacts of ginning quality on the textile process and other related issues. The third level continues the mechanics focus at a simplified level but adds more managerial issues. This curriculum would have to be adapted to fit African circumstances, just as occurred in the Nineties when the Australian industry set up its own school based on the U.S. model.

If the USG sees merit in the idea of establishing a regional ginning school in any of the three African, which would be a highly visible intervention, it would be prudent first to commission an action-oriented needs assessment and feasibility study. The most likely regional locations would be Mali, either Uganda or Tanzania, and Zambia. The study would describe the main equipment and manpower configuration of all gins in the designated region. It would also discover exactly how gin training is presently handled, gin by gin and company by company, to verify that there indeed is a need for a regional school. Moreover, through key informant interviews the study would assess the extent of interest from other major stakeholder groups, e.g. State, parastatal and private firms involved in production, ginning, marketing and spinning; inter-professional associations; ginner associations; major buyers of cotton lint; and relevant USAID missions. It would then flesh out the content, structure, ownership, method of operation, and probable budget of a regional ginning school. Financial and operational sustainability should be carefully considered.

Then, ideally with buy-in from field missions, host country governments, other donors and the potential beneficiaries, USAID would move the concept toward implementation, providing much of the seed money needed to establish and initially operate the school, but on a matching grant basis. To the extent that third-party contributions and service fees can be obtained, part of the

initial funding commitment could go into an endowment. Establishment of such a school or schools should take no more than one year.

### **Sub-option 3p: Reduce the level of contamination in cotton lint in target countries**

SSA cotton producers—especially those in West Africa--take pride in and promote the quality of their cotton lint, claiming that the fact that it is hand-picked gives the region a comparative advantage in the marketplace over cotton that has been machine-harvested or machine-stripped

Yet during the West African Cotton Assessment, anecdotal evidence of a contamination problem was observed. Various key informants alluded to this problem during interviews, stating that substantial claims for contamination had been filed foreign customers, presumably against exporters and or ginning companies. However, the most tangible evidence was seen in Mali, where managers of the modern spinning plant FITINA showed fabric just sent back from their parent company/customer in Mauritius, with minute defects circled clearly on the samples.

Although there are many causes and types of contamination, ranging from leaf trash and sticks to direct and moisture, the use of polypropylene sacks is particularly harmful. That is because once bits and pieces of such bags become mixed with the seed cotton, the polypropylene fibers are broken up very finely by the ginning process, then become essentially invisible during spinning and weaving, and only show up in final fabrics because they will not absorb any dye. Rejection of final fabric, or worse still of finished garments, is extremely expensive in terms of both direct and indirect costs that flow back at least to the gin and (where trace-back by bale is possible) to the producer.

Every two years the International Textile Manufacturers Federation (ITMF) undertakes a global survey of spinners to generate objective evidence of the levels and types of contamination that affect cotton growths from different source areas. In the 2001 ITMF Cotton Contamination Survey, only Mali appeared among the top 25 most contaminated descriptions, ranking in 24<sup>th</sup> place (higher is worse). Yet for the 2003 survey, Burkina Faso appeared as 14<sup>th</sup>, Mali as 20<sup>th</sup>, and Benin as 21<sup>st</sup>. Among the C-4 countries, only Chad ranked quite well in both surveys, far below the cut-off for the worst 25 descriptions. This data seems to indicate retrogression in three of the four countries of greatest interest to USAID with respect to cotton.

This needs to be stopped by: (1) undertaking a major public awareness campaign as to why contamination is hurting the quality image and overall profitability of the sector; (2) by providing innovative harvesting bags of other materials; (3) by using coated covers on open piles and conveyance vehicles; and (4) by using jute or other covers on bales.

If USAID wants to get involved in this issue, it should commission first an action-oriented appraisal of the contamination problem in the C-4 countries, then broaden it to certain other SSA countries, most likely Zambia, Malawi, Tanzania and Uganda. The purpose of the appraisal would be to pinpoint the most important causes, find where they occur in the supply chain, quantify the resulting losses and opportunity costs, identify specific measures used successfully elsewhere to control the problem, and then identify actions needed in the most problematic countries. Based on the study results, USAID should then propose and undertake an extended campaign to reduce contamination, particularly relating to the misuse of polypropylene.

### **Sub-option 3q: Improve the utilization and marketing of cotton seed**

Cotton plants actually yield more cottonseed than lint (162 kg of cottonseed for every 100 kg of

lint, on the average), so what happens to the cottonseed produced through the ginning process is actually quite interesting. In the U.S. just 5% of the cottonseed output is saved for seed, yet continued use of fuzzy seed in most SSA countries may mean triple that percentage. In countries where farmers retain title through ginning, cottonseed generates about 15% of farm income. Where the gin retains the cottonseed, as in U.S. and Australia, ginning prices are adjusted accordingly. Since in West Africa producers sell their seed cotton to the ginning company, they get little or no credit for the net value (oil, meal, linters, hulls) of the cottonseed. In the C-4 countries, most cottonseed is processed locally by parastatal or private oilseed crushing plants, which are mostly operating at about 30% of capacity and therefore prize it highly. Often they have preferential rights, and the prices set or offered may not reflect the world oilseed market, nor alternative local uses. Since cottonseed spoils rapidly, whether destined for oil or animal use, proper storage is crucial during the peak season, but it appears to be deficient. The resulting distortions and losses affect the availability and price of cottonseed or cottonseed cake destined for feed use with cattle or oxen.

Although not much explored or discussed in the literature on African cotton, this topic has considerable potential importance in terms of transparency, equity and net returns to small farmers, not to mention its impacts on farm productivity because of the implicit connection with animal traction in a labor-short situation. Cottonseed management and utilization should be part of any major USAID support program for the SSA cotton sector.

### **Sub-option 3r: Improve seed cotton grading and lint classing**

Since 1992, USDA classification of cotton lint has been done mainly through instrumentation (as opposed to the judgments of human classers). All official USDA classification offices have converted to the use of “high volume instruments” (HVIs). As currently comprised, the USDA’s HVI system provides eight commercial measurements of key cotton fiber characteristics. These include: fiber length, length uniformity index, fiber strength and elongation, micronaire, color (greyness and yellowness), short fiber content, and maturity. A trained human operator can obtain all HVI measurements within about 20 seconds. Results are simultaneously stored in electronic files and are immediately available for dissemination. (Leaf grade, preparation and extraneous matter are still generally assessed manually and visually by cotton classers).

Since the USA is the only country that has developed a nationwide, government-certified HVI Classification Service, it is the *de facto* source for HVI calibration and operation procedures. HVI Classification has resulted in a competitive advantage for the USA in global marketing.

If feasible, establishment of an adequate HVI system for the cotton producing countries in Africa and elsewhere would facilitate the access of their cotton to diverse global markets. Indeed, an official consensus that this is the direction to take globally has been reached by cotton producing and consuming nations all over the world.

The current HVI-dominated classification system used in the USA evolved out of the traditional system, which is commonly referred to as “hand classing” of cotton. Hand classing relied primarily on “pulling the staple” (to visually gauge the “dominant length” of the fibers), along with visual evaluation of color, leaf trash content, and the “character” of the fibers. The same cotton/textile industry that demanded HVI be incorporated into the marketing system also demanded that it provide continuity with the traditional system. The hand-classing approach is much closer to an “art form,” while the HVI approach brings cotton classification more into the realm of science.

Hand classing necessarily makes personal relationships between sellers and buyers of paramount importance, due to the limited basis for understanding and diagnosing causes of poor performance by cotton fibers in textile processing. By providing objective criteria for evaluating fiber characteristics HVI classing fosters a more open, transparent, competitive trading system in which buyers may effectively “shop around” for the best fiber values.

Long before the establishment of HVI Classification, procedures and terminology in the USA dominated the global trading system. The traditional USDA grades for cotton are universally recognized in global cotton trade. As of 1998, prominent merchant and textile manufacturer associations in 21 countries (including India, Brazil, Japan, Taiwan, Mexico, Peru and several EU countries) had formally joined the Universal Cotton Standards Agreement, which is based on the USDA system. Indeed, the “cotton standards” used by the world are selected and approved every three years at the Universal Cotton Standards Conference, hosted by the USDA in Memphis, Tennessee.

The traditional USDA (and Universal) grades, ranked from highest to lowest, are the following: Good Middling, Strict Middling, Middling, Strict Low Middling, Low Middling, Strict Good Ordinary, Good Ordinary, and Below Grade. While recognizing the USDA and Universal Standards in international trade, many other countries still use their own classing and grading systems at the ginning stage and sometimes in exports. Figure Seven at the end of this text presents an overview of the main sources and their respective grades of cotton.

While cotton lint from the SSA countries (especially the C-4, Zambia and Zimbabwe) is well-valued in the marketplace, some of its potential value is lost to the sector in general and to growers in particular because of the prevailing cotton lint classing system, as well as continued reliance on seed cotton grading (which is not used at all in the United States and other developed countries where the source of each bale is tracked back to a particular producer, who also retains title).

Many experienced government and private sector operators in the Sub-Saharan cotton economy are aware of HVI testing for cotton lint, and there is some equipment in most of the countries. Yet to our knowledge in none of the SSA countries is HVI yet used as the only method of classing cotton lint, and in most it is not even an important method. Manual classing still predominates.

There are various reasons for this apparent discrepancy with world trends. First, there exists a perception within the region and among certain foreign buyers that HVI testing does not do justice to the unique traits of hand-picked cotton, especially that which emanates from the Franc Zone Area. Secondly, while sourcing often occurs from within the region via the regional procurement offices of the major international trading companies, the actual marketing of cotton lint to spinners is mostly done outside the countries themselves. Third, the instrument-based testing that does occur in the SSA countries (except perhaps in South Africa, Zimbabwe and Zambia to some extent) does not appear to be used for marketing purposes, but rather as a check on hand-classing.<sup>109</sup> Fourth, since the ginning companies take title to the cotton as soon as seed cotton is delivered to and accepted at the gin, from that point onward the ginning companies effectively become the only stakeholders in lint quality. Fifth, the SSA facilities in which HVI equipment has been installed for experimental or benchmarking purposes do not meet the

---

<sup>109</sup> HVI testing of C-4 lint properly done in France is indeed used for marketing, but the results are not transparent enough, nor timely enough to help the C-4 industry to adjust growing, harvesting or ginning conditions

standards of worldwide best practices. Power outages are common, and ambient control is a problem. Without the required controlled conditions, HVI results have little value. Lastly, a “green-field” HVI classification laboratory in Africa that could test between 300,000 and 400,000 bales (i.e., samples) each year would probably cost at least \$3,000,000 to construct.

Moreover, part of the operating costs for the USDA cotton classification is a highly coordinated process of collection and delivery for cotton samples from cotton gins to classing offices, which enables the classing results to be electronically available to cotton producers within about three days after the cotton is ginned.

Another indispensable component of a successful HVI classification is system-wide quality control. The traditional hand classing of cotton is not susceptible to statistical validation of its results. Therefore the use of the traditional system requires a tacit assumption that results provided are correct. If HVI results among laboratories in diverse countries are not sufficiently repeatable, then the application of this expensive technology still does not advance the industry beyond the uncertainty of traditional practices.

The potential for inefficiency and/or corruption within a country’s cotton classification system depends significantly on the structure and integrity of the larger production, marketing, and governmental systems. Furthermore, unless the commercial incentives for higher quality cotton flow back to cotton producers, advancements necessary within the African countries for effective global competition will be retarded or prevented.

While instrument -based classing should be taught and encouraged, the analysis above implies that it may be years before the industry evolves far enough to make it pay commercially in the region. It will probably emerge first in those countries that fully privatize and liberalize, and that no longer export through the traditional France-based channels.

Meanwhile, most of the SSA countries will continue to perform seed cotton grading, based mainly on perceived levels of trash and stain. It is necessary to ask whether or not the current system of grading seed cotton adds any value. If so, what can be done to perfect it further? If not, why keep it?

Ideally over time, the region might be able to move toward a more modern system of seed cotton procurement, ginning and marketing in which producers—at least as village groups, associations or cooperatives—have a clear incentive to pick and deliver cleaner seed cotton. Yet within the C-4 countries, for example, either 2 or 3 grades are applied to seed cotton. There is a modest price differential between first, second, and sometimes third grade product, yet the data indicate that somewhere between 95 and 98% is typically grade number one, which is implausible. Even if more rigorous application of a more objective and logical set of standards were possible, which seems to be what obtains in Zimbabwe, the different grades from a particular assembly point are immediately intermixed when the truck is loaded, and often even the identity and associated quality of a given sourcing point gets lost if product is subsequently loaded from another assembly points. Since at times the volumes collected are so small, there seems to be no way to keep separate seed cotton batches by quality after it is picked up by a truck. Similarly, once the truck unloads at the gin, either directly via suction tube or indirectly into a holding room, additional intermixing occurs.

In the fieldwork conducted in West Africa in late 2004, the Cotton Assessment Team found no easy answer to these challenges, but did conclude that the seed cotton grading system should be preserved for now in order to have some way of measuring volumes delivered, of deciding what

average price to pay, and of leaving at least the appearance of an incentive to improve quality. On the other hand, it was felt that C-4 countries should at least make a serious effort to improve the present system, both in content and in application, by taking a hard look at other countries that seem to have a more effective system, especially in Southern Africa.

In sum, while recognizing the significant differences in circumstance between cotton quality management in the United States and the SSA countries, and in particular between their respective grading/classing systems, the USG (both USAID and USDA) should help selected countries to improve the quality of the cotton lint they offer to the global marketplace by: (1) tightening criteria, methods and incentives applied to the grading of seed cotton; (2) improving sampling, handling, and bale identification; and (3) encouraging movement toward more reliable instrument-based testing.

What this means specifically is that the USG should:

- Help target cotton-producing countries build a stronger culture of quality, via awareness and educational campaigns aimed not just at producers but all economic actors in and around the supply chain.
- Encourage the cotton industry in the C-4 countries to tighten up and make more uniform their systems and procedures for grading seed cotton, including comparative analysis of practices in other African or South Asian countries and adoption of best practices identified in that analysis.
- Encourage the SSA cotton industry to continue to move toward best practices in classification, which means upgrading classing rooms to certain minimal standards, moving toward recognition of Universal Standards, creation and maintenance of reference samples, more emphasis on bale identification, improved sampling procedures, better tagging and handling of samples, better record-keeping, and increased use of instrument-based classing.
- Encourage the SSA cotton industry to make a better connection between the use of in-country classing and marketing by improving the flow of information between gins and foreign HVI testing, and by sending samples to the USDA national quality control center for benchmarking comparison.
- Assist the cotton industry in each country to train classers in Memphis

### **Sub-option 3s: Support Niche Cotton Production and Marketing**

Interest in both organic and colored cottons is often expressed in Africa. Actually they are distinct categories, not logically connected, except in the sense that they both represent niche marketing. Yet in the United States, where they were both pioneered during the 1990s, there was a strong tendency for colored cotton to become a subset of organic cotton in marketing scenarios.

The motivation and market potential for colored cottons has been primarily based on a subjective desire for more “natural” and less “environmentally damaging” cotton products. Obviously, this same motivation and market potential are relevant for organic cotton. A logical, but very small, niche market exists for people who require textile products that are hypo-allergenic (a market that is analogous to, say, one for people who are allergic to peanuts or lactose intolerant.) But the primary motivations driving demand (therefore, market segmentation) have tended to put organic and colored cottons within the same market niche.

**Figure Seven**

**Equivalent Grades of Cotton in Different Countries of the World**

Other Countries	USA and Universal Standards Color and Leaf Grades							
	Good Middling 11-1	Strict Middling 21-2	Middling 31-3	Strict Low Middling 41-4	Low Middling 51-5	Strict Good Ordinary 61-6	Good Ordinary 71-7	Below Grade 81
<b>Argentina</b>		B	C	C $\frac{3}{4}$	D?	E $\frac{3}{4}$	E $\frac{1}{4}$	
<b>Bolivia</b>	Good Middling	Strict Middling	Middling	Strict Low Middling	Low Middling	Strict Good Ordinary	Good Ordinary	Below Grade
<b>Brazil</b>	3 and 3/4	4 and 4/5	5 and 5/6	6	6/7 and 7	7/8 and 8	9	
<b>Burkina Faso</b>	Boby/5	Boby	Toma	Vota	Bufa			
<b>Chad</b>	Lero	Baja	Bali	Bama	Bapo	Boke	Bori	Bani
<b>China</b>	1	2	2	3	5	6	7	
<b>Columbia</b>	Good Middling	Strict Middling	Middling	Strict Low Middling	Low Middling	Strict Good Ordinary	Good Ordinary	Below Grade
<b>Ecuador</b>	Galápagos	Manabí	Portoviejo	Portoviejo		Manta		
<b>Egypt</b>	Extra	Fully Good	Good	Fully Good Fair	Good Fair	Fully Fair	Fair	
<b>Greece</b>	3	4	5	6	7			
<b>India</b>	Extra Super Fine	Extra Super Fine	Super Fine	Fine	Fully Good	Good to Fully Good	Good	
<b>Iran</b>	Extra	1 White	2 white	3 White	4 White	2 Spotted	3 Spotted	4 Spotted
<b>Israel</b>	Good Middling 11-1	Strict Middling 21-2	Middling 31-3	Strict Low Middling 41-4	Low Middling 51-5	Strict Good Ordinary 61-6	Good Ordinary 71-7	Below Grade 81
<b>Madagascar</b>	1 <sup>st</sup> Extra	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>				
<b>Mozambique</b>	Extra	I	II	III	IV	V	VI	
<b>Pakistan</b>	Super	1/Super	1-2/1	3	4	4/5	5	Below Grade
<b>Senegal</b>		Sigal S	Sigal	Tama				
<b>South Africa</b>	Deal	Dirk	Doly	Duns	LFY	Below Standard Grade (BSD)	Below Standard Grade (BSD)	Under Grade
<b>Sudan</b>	Top Grade Acala SG		Grade 2 Acala SG	Grade 3 Acala SG		Grade 5 Acala SG		
<b>Syria</b>	Extra	Zero/Extra	Zero	One	Two		Three	Below Grade
<b>Tanzania</b>	Tang	Gany+2	Gany	Gany-3	Gany-2	Gany-1	Yika	Under Grade
<b>Uganda</b>	Ucon	Ucob	Ucop	Ucoa	Ucom			Ucog
<b>Zimbabwe*</b>	Bumi	Zaka	Vuti					

\* Vuti is Middling Plus (30) and leaf grade 3, while another grade, Rope, is equal to Strict Middling Spot (22) and leaf grade 1.

## Organic Cotton

The legitimacy of organic cotton is based primarily on the agronomic practices followed in growing, harvesting and processing it. In the US, Texas has been a leader in establishing and confirming practices for certification of cotton's organic status. Texan requirements include that, for a period of three years, the land on which the cotton is grown must have been free from synthetic fertilizers, chemical insecticides and herbicides, etc. Neither can chemical harvest aids or other chemical applications be used. During this three-year period the land is designated as "transitional" and the cotton may be sold as organic but with this special designation. None of the forbidden inputs may be used during any years after the process for organic certification begins; otherwise the certification is lost and the process must begin anew. In order for the certified organic status to be maintained through to the finished textile product, restrictions on chemicals used in ginning, spinning, weaving, dyeing and finishing must also be adhered to, and safeguards must be put into place to avoid intermixing of organic and non-organic seed cotton, lint, and seed cake to be offered as organic. Therefore, these processes must be done at certified processing plants

It should be emphasized that all the restrictions on production, harvesting and processing of the cotton do not impact the objective performance of the textiles to 99.99% of consumers. The possible exceptions to this would be consumers who are, for example, hypersensitive to the residual of finishes used in textile processing. The larger demand base resides with those consumers who simply feel a subjective need for such organic products. This felt need is based primarily on perceptions about impacts on the larger environment, rather than on the properties of the consumer product.

The short history of organic cotton has provided evidence of the desire by sellers to advertise organic status without fulfilling meaningful requirements for such status. But buyers generally require third-party certification. Possible entities to provide such certification include government agencies, industry associations, and independent organizations. In any event, a demonstrable adherence to specified protocols is needed for the certification to be authoritative in the marketplace.

The land area devoted to organic cotton is not known for the USA, much less for the world. In the USA, it is likely that the area devoted to organic cotton in 2003 is less than 10,000 acres. It is unlikely that the total acreage in the USA has ever exceeded 50,000 acres. One of the few available summaries<sup>110</sup> of world production suggested that it may have peaked in 1995 at 12,864 tons, due to a surge in US production to the level of 7,425 tons. As of 1997, this source reported global production of about 8,000 tons. United States was still the largest producer (2,852 tons), followed by India (930 tons), Uganda (800 tons), Turkey (800 tons) and Egypt (630 tons). Other African countries (Tanzania, Mozambique, Senegal, Benin, Zambia, Zimbabwe) reported much smaller production, probably experimental. Anecdotal evidence indicates that larger plantings may have been tried in recent years, but that it has been difficult to find a market willing to pay the desired premium, so it has often been sold as conventional cotton. Yet in mid-2003 one of the largest garment dealers under AGOA announced plans to invest US\$40 million in a spinning-weaving-knitting operation in Uganda that would be dedicated to organic cotton products.

---

<sup>110</sup> Agricola Partners, Pesticides Trust, as reported on the Organic Cotton site ([www.sustainablecotton.org](http://www.sustainablecotton.org))



## Colored Cotton

Seeds for colored cottons have been stored in USDA germplasm banks for many decades. In the 1980s and early 1990s, these were accessed and used to multiply the seeds to obtain commercial quantities. In contemporary breeding programs that emphasize white cottons, an occasional plant will express the colored gene. These plants are routinely culled as soon as the colored fibers are evident.

Only two companies in the USA ever produced significant quantities of colored cottons: Vresis Ltd. and BC Cotton. Neither of these companies now produces these cottons. Vresis Ltd. maintains an identity in the market, but its focus is now on organic cotton. The reason for withdrawal from the market is simple: neither company could develop a market base sufficient to support the enterprises. There are three overriding reasons why:

- (1) Buyer unwillingness to pay premiums adequate to fund the development of colored cottons,
- (2) The limited color choices available from the natural color spectrums, and
- (3) The relatively poor fiber quality of the colored cotton varieties.

Notwithstanding the withdrawal of these two firms, one can still find a plethora of offerings of organic and/or colored cotton products in the marketplace. All are offered at hefty price premiums, which translates into small sales volume.

A prerequisite for successful colored cotton varieties would be a focused, long-term breeding program, which is not happening anywhere in the world. There is a very remote possibility that a breakthrough in genetic engineering would enable the imparting of color to cotton fibers. However, there is no known activity in this regard outside of basic research laboratories and no promising results have been made public. Moreover, the probability of successful commercialization of any type of colored cotton cannot be estimated.

## Potentials in Africa

Notwithstanding the recent history of organic and colored cottons, the incremental potential they have for Africa should not be ignored. Historical cultural and commercial ties with the EU could mean comparative advantage to Africa in a large marketplace, which is arguably the world's most attentive market for organic and natural agricultural products, including cottons. The EU also has a strong policy bias toward special treatment of Africa, with respect to both cotton production and textile manufacturing. EU regulatory agencies have shown a willingness to be more flexible with Africa about the official requirements for qualifying as "environmentally responsible" cotton. Yet even in Europe these cottons and products derived from them will always be a niche market, albeit perhaps a viable one for certain production areas in Africa. A price premium does exist for both organic and colored cottons at the current time. Of course potential producers must determine whether the price premium is sufficient to cover the higher cost and greater risk of producing these cottons. A closely related issue is the likely behavior of prices as the supply of these cottons increases. The tendency for price premiums in niche markets to shrink disastrously is an oft-repeated phenomenon that has affected the profitability of many organic food and agricultural products.

By definition, niche markets are appropriate when the customers have unique preferences. With organic or colored cottons, the consumers in the relevant market are motivated by something different from the basic, objective properties of the textile product. Appealing to these

motivations is the key to success; therefore, creative marketing that involves proper certification, high information content and usually different channels of distribution is the means to achieve success. If an advantageous production area for organic and/or colored cottons can be connected with an effective marketing capability, this should be encouraged, but it will not be an appropriate strategy for a large number of production areas in Africa

In sum, USAID could and should encourage producer groups that show interest in organic cotton (but not colored cotton) when they have the growing conditions necessary to isolate and control it, as well as a gin that can qualify. USAID should also support organic certification efforts. However, neither initiative should be allowed to divert economic actors, host country governments and development agencies from the greater challenge of improving productivity, competitiveness and sustainability in mainstream cotton.

#### **Option 4: Concentrate on Textiles**

Moving downstream, the main value-adding steps in the C-T-A pipeline include spinning, weaving/knitting, dyeing, finishing, and printing. Unfortunately, the African cotton economy has a “missing middle” with regard to these steps. While 2003 exports of upstream cotton products (seeds, lint, cake, waste, linters) by AGOA countries to the entire world amounted to about \$380 million in value, exports of intermediate products such as thread, yarn and fabric amounted to just \$133 million.<sup>111</sup> This imbalance is partly due to local consumption of domestic production, at least in the case of South Africa. Yet if the manufacturing of intermediate inputs were more competitive, one would expect to see much greater cross-border trade in these products, as a means of satisfying AGOA Rules of Origin (ROO) requirements. Unfortunately, according to ICAC figures, the entire SSA region accounts for less than 1% of the volume of world production of cotton yarn and 1% of cotton fabric production.

The textile industry worldwide suffers from overcapacity. At a recent industry conference, one prominent insider pegged it at 50% in fibers, 35% in spinning, and 32% in weaving. There are actually two different problems of capacity: what could be produced, and how efficiently it could be produced. They are not the same. A spinning factory with more spindles cannot necessarily trump one with fewer spindles that have higher productivity or lower cost. Many of the spinning mills in the SSA countries use outdated technology and equipment that has lower productivity than what has been installed in recent years in China and elsewhere in Asia. Virtually all SSA countries also suffer from high energy costs (although infant industry or industrial zone subsidies sometimes ameliorate that problem, at least for a while).

Success in the textile industry typically turns on cost, quality, service and speed. The more mainstream the product, the more crucial the cost. The more differentiated it is, the more that quality, service and (often) turn-around time matters. When the local or regional market is large, it may be feasible to achieve the scale necessary to compete on costs. On the other hand, when readily accessible markets are small, or saturated by imports, the only choices may be tackle larger but more difficult foreign markets based on quality, service, and time-to-market.

While some of the SSA countries might aspire to succeed based on the latter strategy, the region already suffers from high transport costs and long transit times, and the dynamics of the textile industry are changing against SSA in other ways. In the past, automation mostly enabled companies to produce large orders at low prices. Yet technological advances now permit the flexibility in set-up needed to rapidly satisfy small, customized orders that are tailored to specific

---

<sup>111</sup> TradeMAP, UNCTAD, 2003.

customer needs, and at competitive prices., even with high-speed equipment that can also handle long runs.

Emphasis was given in the past to commodity products, yet in recent years (particularly with the rise of China) the attention in developed countries is shifting to innovative or value-added yarns. Niches include extreme counts, multiple fibers, effect yarns or other variations. Yet niches that succeed tend to fill up fast, so niche production or marketing is not a panacea. For example, the practical problem with specialty yarns is not price but volume: how to manage multiple stock-keeping units (SKUs) and how to ship 1,200-pound lots.

With the exception of major oil-producing countries like Nigeria and Angola, and minor suppliers like Equatorial Guinea and Sudan, nor does Sub-Saharan Africa have any potential comparative advantage in man-made fibers. Therefore, it makes no sense to dwell on textiles made of man-made fibers, except as a complement or a competitor.

As far as natural fibers are concerned, wool is important in South Africa and Lesotho, yet cotton production is much more significant overall for the SSA countries. Given scarce development resources, if textiles are to be a development priority at all for the SSA region, the focus should probably be on cotton-rich textiles, i.e. those that use at more than 50% cotton fiber, and preferably 65% or more, where the possibility of filling the missing middle with national or regional yarns and fabrics does still exist, at least on paper.

AGOA presents a real dilemma for textile producers in Sub-Saharan Africa. AGOA does offer the promise of an expanded marketplace in which the SSA countries have a certain tariff advantage for a limited period. Yet as long as the successive iterations of AGOA allow the use of less expensive third-country yarns and fabrics, which was true in AGOA I-III, domestic textile producers will face strong foreign competition plus great uncertainty about the future. There is little doubt that extending under AGOA III the exemption for LDCs to 2007 and allowing Mauritius and Botswana to enjoy similar benefits and therefore use third-country fabric helped the garment industries, but at the same time it reduced the incentive to invest in the textile sector in Sub-Saharan Africa. It probably just prolonged the day of reckoning for existing garment-makers, and stopped additional, more modern textile mills from opening. With few exceptions, the SSA textile industry is not ready to supply the quantity and variety of locally made fabric that apparel makers already exporting to the United States under AGOA require.

After the AGOA III exemption phases out in 2007, garment-makers through the region will have to choose between a narrower range of higher-priced US or regional fabric to enjoy exemption of duties, or lower-priced foreign fabric of broader range that would nullify duty-free status. It is likely that many apparel makers in SSA countries will often conclude that AGOA preferences are less valuable than being able to produce the products that their customers most desire, even if that means using non-exempt inputs and competing head-on with China and other Asian suppliers. To the extent that occurs, again it creates a disincentive for regional textile firms to try to fill the gap.

Although the export data for AGOA apparel confirm that cotton is the primary fiber being used, even in blended fabrics, USG support for AGOA-related apparel exports and USAID support for the cotton sector have rarely been connected at all. In the few countries that USAID is assisting cotton, its work stops at the ginning stage. While the desirability of increasing local value-added is obvious, the same “missing middle” exists in USAID programming, in the sense that practically no development support is being provided to SSA spinning, weaving, knitting, dyeing, finishing or printing industries. Moreover, even if other agencies such as UNIDO or the World Bank might have interest and comparative advantage in that development space, their programs

do not appear to adequately fill it. Some might argue that this presents an important development opportunity.

Yet how best to stimulate the textile sector in SSA countries under present conditions is not at all clear. Which products and markets present the most attractive opportunities? Which source countries have a chance of competing in those value chains? Which steps in the textile process need strengthening to support the most plausible deals? Where will the capital and technology come from? Much less research has been done on textiles in Africa than on apparel or cotton, so the information and analysis necessary to make informed decisions is lacking.

Since the EU has already announced a cotton initiative that targets ACP countries, and has other on-going programs that support textile and apparel industry development aimed at the EU market, a logical focal point for any USAID initiative in textiles would be intermediate manufacturing activities that feed into actual AGOA exports of apparel. The 2002 data revealed that HS 9802.00.8044 (Apparel assembled from U.S. cut fabric from U.S. yarn) constituted 43% of all AGOA country exports, that HS 9820.11.06 (apparel cut and assembled from U.S. fabric, yarn and thread) accounted for 25% of dollar value, that HS9820.11.18 (Knit apparel from U.S. fabric, yarn and thread) represented 17% of exports, and that HS9820.11.09 (Knit apparel from regional or U.S. fabric, yarn and thread) amounted to 9% of exports. Since these four categories accounted for 95% of the exports to the United States, and the growth rates are high, it would seem that the African textile industry should target the types of materials needed to make those kinds of products.<sup>112</sup> It was previously noted that the largest increases in AGOA apparel imports have occurred in two broad product categories: (1) knit shirts and blouses; and (2) trousers, slacks and shorts. Focusing on textiles needed to feed raw materials into the manufacture of woven and knitted cotton trousers, slacks and shirts for men and cotton knit shirts and blouses for women would be a logical approach.

Denim manufacture that uses regional cotton and feeds into blue jean manufacture is also a logical target, since a very large investment in a modern facility has recently occurred in Southern Africa. However, it is not clear that USAID could or should anything in particular to support that venture, nor is it obvious that it should be replicated in a post-quota situation.

Of course the export market is not the only possible market to target. The domestic market must also be considered, and the possibilities for import substitution seriously weighed, preferably on a country-by-country basis. Unfortunately, aside from the import value data already presented in this report, which probably reflect mainly imports of thread, yarn and fabrics for use as intermediate inputs into apparel to be manufactured for export, there is very little hard volume data available on domestic use, and it is not sufficiently disaggregated to determine exactly which textile products could actually be substituted. Except for South Africa, it is difficult to get a handle on the real size and composition of the textile market in SSA countries.

Whether the target is the global or regional markets, an Africa-wide survey of the availability and quality of data on textile industry capacity, structure, performance, and product mix is sorely needed to establish the baseline information necessary to make informed decisions as to a possible textile development strategy, broken down by country and segment.

---

<sup>112</sup> Trade Act of 2000 Category 31, OTEXA Database, U.S. Department of Commerce, November 2003.

Some reconnaissance-level assessments of the textile sector<sup>113</sup> in selected East and Southern African countries and for the region as a whole were completed last year with USAID/REDSO funding. While further work is needed, the author did suggest a plausible approach to development interventions in the textile arena. He recommended that companies in each country be stratified into three categories. Category A would include well-managed companies with good technology, quality products and already proven export experience in the global marketplace. Category B companies would comprise those that have large and dated vertically integrated plants but with a valuable technology core that could be built upon, given availability of finance and technical assistance. Category C would cover those firms for which a profitable future is in doubt, whether due to management, plant and equipment, technology or lack of markets and successful experience. The author suggests, and the authors agree, that USAID support should be limited to those in Categories A and B.

### **Option 5: Concentrate on Apparel**

After textiles, the next set of value-adding opportunities for cotton and blends is in the realm of apparel manufacturing, which subsumes cutting, sewing, special finishes, and packaging. USAID mission have long recognized that the Agency has an obligation and high-level mandate to help make AGOA work, which mainly means striving to increase apparel exports to the United States. Much has been done, initially through the AID/W based ATRIP project, then through the three Global Competitiveness Hubs established on a regional basis in Gaborone, Nairobi and Accra with TRADE and other Development Assistance funding. Regional and bilateral Mission activities in support of AGOA implementation have included trade capacity-building, assistance with accessing the U.S. market, encouragement of private and public investment, export promotion, and trade-oriented deal-making.

Again the key success factors in the apparel trade are cost, quality, speed, and service. Although any supplier (enterprise or country) should aspire to achieve an acceptable ranking on all four, the successful supplier is usually known for one or two especially. Cost advantage can derive from low raw material costs, low wage rates, economies of scale in production, superior technology, or lower transport costs. Quality advantage can come from superior design and cutting, better fabric, better accessories, better manufacture, and more consistent sizing. Service advantage can derive from larger stocks kept closer to the buyer, capacity to handle orders that are larger or smaller than the norm, capacity to handle greater diversity of product categories or styles, better handling of rejects, sharing of promotional and merchandising expenses, or new product ideas. Speed advantage can derive from quicker turnaround times for design, cut, make and trim, proximity to market, or quicker transport. The mix offered in terms of cost, quality, speed, and service is what most defines the competitiveness of any participant in the apparel trade.

What matters most depends of course on the characteristics of the target market (preferences as to product attributes, as well as geographic location, consumer segment, and price point) that the supplier would like to satisfy. This will change over time. With the phase-out of ACT, which led to an estimate 18-20%% reduction in China's prices, customers are more price conscious than ever. At the same time, however, trends and fads change much more quickly than in the past. Improvements in electronic data interchange (EDI) made possible by scanning devices at checkout counters, coupled with improvements in cargo transport, have made it more crucial than ever to offer timeliness in style and color changes, in order fulfillment and in stock replenishment. While an acceptable response time for clothing articles might have been 4-7

---

<sup>113</sup> Cockroft, J., "Regional Market Assessment on Lint and Textiles", RATES Program, Chemonics International, September 2003.

weeks before, today the aim is for just one week; and for blue jeans, the bar has been lowered from 4 weeks to as little as 3.5 days.

The choice of strategy depends not only on the nature of demand, but also on logistical and supply capabilities. Unless airfreight (i.e. cargo charter) is used, there is no way for a jeans maker in Zimbabwe to satisfy the 3.5-day target in the EU market. Proximity to airports and ports, as well as high frequency of service, good reliability and low cost of international freight, have all become critical advantages (or when missing, disadvantages). Unless factory output is fast enough, it makes no sense to pursue orders for 100,000 pieces per month.

Offshore apparel makers have four basic alternatives with respect to markets in developed countries. They can concentrate on niche apparel (and handicrafts), using traditional fabric to create parts to be incorporated into fashion items, or else creating complete articles that are based on traditional fabric, prints or other indigenous materials. Or they can limit their role to assembly, in which the enterprise simply “makes up” part or all of an apparel article following instructions and using material provided in their entirety by the contracting entity (which could be a buyer or a contractor to a buyer). Or they can play the role of private label manufacturer, making apparel against contract specifications for a retailer in the target market. This may involve anything from simple assembly to “full package” manufacturing in which the enterprise takes responsibility for the entire piece, handling design, cutting, making, trimming, finishing and packaging. Finally, they can serve as original branded manufacturers (OBM), dealing only with a proprietary label, usually owned by a marketing firm in the target market<sup>114</sup>.

Niche apparel businesses keep opening and closing all over the world, especially in countries that have indigenous populations with unique and interesting handicrafts, often involving colorful cloth hand-woven with back looms or other types of handlooms. Unfortunately the market is small and apparently not expanding. Although it can be a good business for the occasional entrepreneur, this is not a market on which to base a country strategy.

Assembly operations have proliferated in Mexico and the Caribbean Basin countries (especially Dominican Republic, Haiti, Honduras, Guatemala and El Salvador), thanks to the “production sharing” arrangements encouraged under HTS 9802.00.80 (formerly clause 807 of the U.S. tariff schedule). Inclusion of apparel from the CBI and Andean Trade Preference countries in the Trade Act of 2000 provided a further stimulus to assembly operations, for the first time opening the door to local or regional fabric, as with AGOA. Under the Outward-Processing Trade (OPT) arrangement first established by the EU in 1982, apparel assembly operations oriented toward the EU market have also prospered in Tunisia, Morocco, Turkey and some of the Eastern European countries.<sup>115</sup>

Private label manufacturing of apparel was born in East Asia in the Sixties and Seventies, with Hong Kong SAR, Taiwan Province of China and the Republic of Korea leading the way by first establishing close linkages with U.S. retailers and marketers who were interested in lower cost offshore production sources. Later the Asian Tigers managed to consolidate their positions in supply chains, even as quotas were getting used up or expiring, by arranging third-country subcontracting in countries that still had quotas and also lower labor costs. These included Indonesia, Sri Lanka, Viet Nam, Myanmar, Indonesia and India. For the EU market, Turkey has become a major full-package private label manufacturing country, as have many firms in

---

<sup>114</sup> Gereffi, G. and O. Memedovic, “The Global Apparel Value Chain: What Prospects for Upgrading by Developing Countries?”, United Nations Industrial Development Organization, Vienna, 2003.

<sup>115</sup> Idem.

Romania, Poland, Hungary and the FSU.<sup>116</sup> As the Mexican and U.S. economies become full integrated under NAFTA, Mexico has also begun to shift away from *maquila* (assembly and cut-make-trim) processing and toward full package manufacturing.

Over time a few of the best firms in Hong Kong SAR have upgraded to the OBM level, both for the U.S. and Japanese markets. Some of the more sophisticated East European apparel manufacturers also aspire to OBM status.<sup>117</sup> Only a few firms in the SSA region—mostly based in South Africa, can even think of this approach. The main challenges are rapidly changing styles, product proliferation, uncertain demand, long lead times, declining brand loyalty, and the need to sustain an extended marketing, sales and distribution organization.

It should be noted as well that some East Asia countries that initially competed in apparel later elected to integrate backward into the more capital-intensive and industrial textile and fiber industries. For example, three-quarters of Taiwan's textile and apparel exports are actually textiles, most sent to nearby countries as part of triangular manufacturing arrangements.

Speaking more generally, in the case of the U.S. market, the main issues for the SSA Region continue to be the AGOA Rules of Origin, cost competitiveness, time and distance to market, turn-around time, and marketing know-how/known-who. For the EU market, the principal concerns are qualification for duty-free entry under the Cotonou Agreement by meeting the "double-processing" requirement, and again cost competitiveness, time and distance to market, turn-around time, and market familiarity and savvy.

A concise evaluation of the prospects for developing countries to participate more significantly and profitably in the apparel value chain was done by Gereffi and Memedovic.<sup>118</sup> They draw a useful distinction between internationalization, which refers to the geographic spread of economic activities across national borders, and globalization, which implies functional integration between internationally dispersed activities. The phenomenon of internationalization is hundreds of years old, but globalization is at most a few decades old. The communication/information revolution has made functional integration possible on a global scale and, coincidentally, greatly facilitated the concentration of market power with the large retailers.

As these authors note, and as the statistics presented above confirm, there has been a long-term trend (since the 1950s) toward concentration of the textile/apparel industry in Asia. Furthermore, this trend has gained momentum with globalization. A fundamental reason why is the regional give-and-take that has characterized Asia. As manufacturers in parts of the region found it necessary to move some production activities elsewhere, they found ways to coordinate activities and keep their comparative advantages intact. The diversity of economic development in the Asian sector has perpetually provided opportunities to seek out, for example, the lowest labor costs for cutting and sewing activities. The cultural realities in Asia have made it possible to develop supply networks that work effectively within this dynamic environment. Geographic proximity to the EU, as well as former colonial ties, have helped Tunisia, Morocco and to a less extent Egypt move down the same path, but Sub-Saharan African countries have had much greater difficulty, as the volumes show.

Unfortunately, commercial incentives are lacking for the major global textile/apparel markets to

---

<sup>116</sup> Idem.

<sup>117</sup> Idem.

<sup>118</sup> Gereffi, Gary and Olga Memedovic, *The Global Apparel Value Chain: What Prospects for Upgrading by Developing Countries?* UNIDO, 2003.

discriminate in favor of Sub-Saharan Africa. On the contrary, there are some major disincentives: red tape, corruption, experience, scale, technology, response time, time to market, transport and energy costs, relative absence of OPT (Outward-processing trade) or other production-sharing arrangements, and lack of a fiber advantage of the kind that Egypt enjoys with its Extra Long Staple (ELS) cotton. For the EU market, additional disincentives include a reduction in tariff advantages as the EU-Mediterranean FTA is implemented and as Eastern European countries accede to the EU. For the US market, time, distance and transport cost tend to undermine the current market access benefits of AGOA, and this will not change even if AGOA III is passed.

Given the current state of evolution of the apparel industry in Sub-Saharan Africa, it seems clear that assembly is still the most relevant international production system for the region. Only a few of the most experienced domestically-owned firms in South Africa and Mauritius, as well as several foreign-owned firms in Lesotho, Swaziland and Kenya are likely to be able to set up and service OEM relationships. South Africa has the massive new Levi-Strauss blue jeans operation. Although Original Branded Manufacturing remains the holy grail in offshore apparel-making, and private label manufacture is a highly desirable medium-term goal, for the next several years at least, USAID support for apparel industry development should concentrate on assembly-type operations, within which every effort should be made to maximize value-added, increase the use of local cotton yarns and fabric, increase the transfer of skills and know-how, and ensure acceptable working conditions and effective pay.

While even apparel assembly does generate local employment, often numbering in the hundreds of thousands, it can still be criticized on several grounds. Since the initial U.S. and EU preference arrangements—807 and OPT—gave duty-free status only when fabric from the US or EU was employed, there was a strong disincentive to source local raw materials, which limited local value-added. That has now changed to some degree for some AGOA beneficiaries, at least until September 2007, and the EU has accorded duty-free status as long as one of the other steps in the chain is done locally. On the other hand, since only parts of garments may be involved in assembly operations, and there was strict supervision, relatively little technology transfer and experiential learning tends to occur. Moreover, too many assembly operations still act like sweatshops, with long hours, poor working conditions, low piece rates and (sometimes) abuse of workers. Any USAID support to apparel manufacture in SSA countries must deal with these realities, consistent not just with current USAID policy but also with ILO guidelines and best practices as embodied in recent free trade agreements like CAFTA.

Lastly, if USAID wishes to provide more support to the SSA apparel industry, it should be selective in terms of value chains, countries, segments and enterprises, because many current players are not likely to survive in a post-ACT world in which China has taken an extremely aggressive stance. The most plausible development assistance strategy would seem to be the one adopted by the Southern Africa Global Competitiveness Hub. It has two parallel thrusts: country cluster-type support to the apparel industry in Lesotho and Swaziland, plus firm-level support elsewhere in the region to selected enterprises that seem to have a chance of surviving and prospering despite the turmoil in the global apparel sector. Triage is inevitable in this situation.

## **Option 6: Improve the enabling environment**

While the cotton, textile and apparel sectors directly involve only agriculture and industry, they are heavily dependent on the energy, transport, telecommunications and financial sectors, so much of what happens in a developing economy affects their long-term viability.



Political, economic and social stability provides the foundation for savings, investment and economic growth in any sector. The latter depend in turn on good governance, which implies forward-looking policies, transparency, a reasonable level of consistency in policy implementation, regulation and enforcement, prudent fiscal management, and judicious investment.

Macroeconomic policies can make or break the cotton, textile or apparel industries, separately or as a complex supply network. Exchange rates are a major determinant of input costs as felt by the domestic manufacturer and of delivered price as experienced by the foreign buyer, so they greatly affect overall competitiveness. For the past several years China has been providing a graphic example of the boom in textiles and apparel that can happen when the exchange rate is undervalued, and in that case, pegged to the dollar. Of course, when a currency is overvalued, the reverse happens, and exports are depressed. Even when the exchange rate is realistic, but the currency is getting stronger for other reasons, the textile and apparel industry can suffer, as evidenced by South Africa for the past two years. Currency convertibility can also affect new business start-ups or make existing export-oriented enterprises prosper or fail. Since the textile industry is capital-intensive, and the apparel industry must finance exports and increasingly hold substantial inventories close to final markets to be able to provide just-in-time replenishment, the availability and cost of fixed asset, equipment, and working capital financing are critical as well. Prudent monetary and fiscal policies, financial regulations that encourage private equity investment, special lending windows for textiles and apparel, and the creative use of guarantee schemes such as the USAID Development Credit Authority can help ease the burden of financing large-scale investments, especially in textiles.

Public investment in basic physical infrastructure—ports, airports, roads, telecommunications, power, water—not only supports general economic growth but can also create exploit or create comparative advantage for agriculture, industry and trade. Infrastructure investments peculiar to the cotton, textile or apparel sectors, such as irrigation schemes, industrial parks or export processing zones (EPZs) can confer competitive advantage for cotton, textile or apparel production. Public investment in people is also crucial, since workers with a solid basic education are the most easily trained to become skilled in (say) running textile equipment and garment making. The C-T-A pipeline also needs good people with secondary and college-level education to become agronomists, agricultural engineers, gin managers, quality assurance specialists, logisticians, designers, IT and MIS specialists, shift supervisors, manufacturing plant managers and general managers. Public investment in institutions is equally important, since vitality in agriculture and industry depends on processes of technology generation and transfer, standard-setting, certification, and building an appropriate regulatory framework.

The general business climate is a major determinant of whether a country can improve its position in global supply networks. As the Asian Tigers have shown clearly, a pro-export attitude by the government is one key aspect of the business environment. As Singapore demonstrates, government intolerance of corruption, especially in customs and port administration, also matters greatly. Since textiles and apparel are both unusually price-sensitive industries, a third key element is the country cost structure. Garment-making enterprises, especially pure assembly and cut-make-trim operations, are notoriously foot-loose. Graphic evidence appeared recently in Lesotho, from which several large players departed unexpectedly in early months of 2005, abruptly eliminating thousands of jobs. Textile factories change locations much less easily due to the heavy capital investment, yet initial decisions to set up a new plant as well as the financial viability of existing operations are both very sensitive to cost, especially wage rates, energy costs and the incidence of duties and fees. A fourth important aspect of the business climate is the extent of friction in import-export supply chains, including efficient port and airport logistics,

agile customs processing, and relative absence of unnecessary bureaucratic “red tape” in government-business interactions and the delays it typically leads to.

A competent, aggressive investment promotion program can also distinguish one country from another in the global competition for new private investment, including but not limited to foreign direct investment. FDI is a critical success factor for the textile and apparel sectors especially, because it usually carries market linkages and technology along with it. Best practices in investment promotion include: a results-oriented investment promotion agency staffed by highly paid and knowledgeable people; independent assessments of country competitiveness for FDI; encouragement of foreign ownership; rapid registration of foreign capital; single-day legalization of new firms; zero or low duties on imported capital equipment; duty-free importation of all required inputs; tax credits for worker training; co-payment of apprenticeships; significant corporate income tax reductions; unfettered repatriation of profits and dividends; and tax treaties with major countries from which investors might come. Many IPAs also develop deal profiles for attractive products or markets, and some perform or co-finance feasibility studies.

Similarly, a pro-active export promotion program can also benefit greatly the cotton, textile, and apparel sectors. Best practices in this area include: certificate programs in exporting; arranging for mentors to lend a hand to new exporters; promotion of the country image in major markets; setting up a market information program for key markets; monitoring the competitive landscape for new threats and opportunities; seeking out and bringing back useful new technologies; supporting participation in trade fairs; arranging trade missions and reverse trade missions; setting up and managing buy-sell bulletin boards; establishing advisory panels to support trade negotiations; assisting in commercial dispute resolution; and establishing a one-stop shop for export document processing.

USAID support for the cotton, textile and apparel sectors should reflect a business-like yet holistic view of the enabling environment, targeting for each client country the policy reforms and public investments that are likely to break through systemic or sector-specific constraints, to encourage private investment in the cotton-based sub-economy, and to improve its profitability.

In concert with the World Bank, the EU Commission, and other donors, the Agency should support progressive rationalization of public and private roles within the cotton/textile/apparel sectors in Africa. The public sector should focus its efforts: (1) where the goods or services to be delivered are clearly public (e.g. adaptive conventional research); (2) where there could be negative externalities (e.g. pesticide registration and use); (3) where benefits cannot be captured privately (e.g. market information), or (4) where there are market failures (e.g. delivery of inputs to inaccessible areas). The private sector should concentrate on becoming more productive and globally competitive in a sustainable manner.

In sum, by virtue of its extensive presence in Sub-Saharan Africa countries, USAID can and probably should make tangible contributions to both public and private sector needs and objectives for the Cotton-Textile-Apparel complex, through the investment options set forth in this paper.